GAS JOURNAL

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SMOOTH AND EASY CHANGE OVER

HISTORY will be made at midnight on Saturday when private and municipal ownership of the gas industry in Great Britain will cease, but the vesting of the existing 1,017 undertakings in the 12 area Gas Boards will not in itself mark any magic change in the practical day to day operation of gas manufacture and supply. Since their constitution in the early weeks of this year the area Boards have applied themselves primarily to the problem of ensuring a smooth, easy, and natural change over from the old régime to the new on May Day, and from what we have seen of their arrangements we have little doubt of the success of this all-important first round of their activities. Having effected the change the Boards will then have to apply themselves to the general policy which, in the words of the Gas Act, is 'to develop and maintain an efficient, co-ordinated, and economical system of gas supply for their area and to satisfy, so far as it is economical to do so, all reasonable demands for gas within their area.' In several recent issues we have indicated in outline the policy which is being adopted in various areas, while the steadily growing list of appointments has in itself revealed something of the shape of things to come. The areas are to be autonomous. They could not well have been otherwise, for no standard administrative 'machinery' would have served the needs of all the areas, which vary enormously in size and character and range from 187 undertakings in the Scottish area and 108 in Wales, to 12 in the North Thames area, where few new problems beyond those already solved in the course of earlier amalgamations are likely to arise. All 12 Boards have set out with the one object in view of giving the best possible service at the lowest possible price, and if their blueprints differ in detail it is only because of differences in local circumstances. We have in mind particularly the proposals of the Wales Gas Board for meeting the needs of gas consumers in the 8,000 sq. miles of the Principality, and those of the Southern Gas Board, with its 63 undertakings, of which only four are municipally owned.

While most of the Boards have made various appointments at divisional and district level, the Wales Board has taken the democratic line of seeking answers to its problems by taking into its confidence those who will have to work the answers in practice, the engineers, managers, and administrative officers of the undertakings themselves. Groups of undertakings have been formed, 20 in all, for the administrative purposes of the change over. In deciding the nature and extent of each group the Board had regard to considerations of gas supply—the size and proximity of each undertaking no less than those of geography, the overall area, and nature of communications. Managers and administrative officers in each group were asked to constitute themselves a Group Committee, and invited to submit their first scheme for a suitable administrative organisation for the experimental year, electing their own chairman and convenor and providing those who, in respect of each undertaking after May 1, on behalf of the Board should do what was formerly done by company directors and gas committees, including such matters as authorisation of payments, examination of accounts, signing of cheques, &c. Certain local authorities will be asked to continue for a time to carry on financial and administrative work as the Board's agents in regard to the undertakings they now own, and at the Board's suggestion the local authorities are establishing a representative consultative committee for Wales to consult with the Board on the terms and conditions of agency agreements. The Board is determined to preserve for each manager in respect of his undertaking generally the same authority and responsibility as at present. The Board's decision to take all managers into its confidence has been overwhelmingly justified; first class ideas and suggestions have been brought forward. Mr. T. Mervyn Jones, Chairman of the Board, told a Press conference at Ruthin last week that the groups were born to solve the transfer problem; they would live to serve as vital links between the Board and each of its undertakings, and would survive to fulfil increasingly functions in the industry. It might be objected that there were too many groups. To that there were two answers, first the matter of geography, and second of logic; it would be simpler and sounder to add many small groups together if later found desirable, than to sever any over-large group.

As regards the long term policy of the Board, it is hoped that larger resources in capital and technical skill will in due time make possible in all parts of Wales those improvements in plant, distribution systems, and general technique which in some places are long overdue. In the three heavily populated regions—Monmouthshire, Glamorganshire, and Carmarthenshire; Wrexham and Connah's Quay; and the North Wales coast, the Board hopes, again *in due time*, to bring about schemes for major gas grids. Taking the view that the finest 'investment' it can make is one in the quality of persons now coming into the industry who will ultimately become responsible for its destinies, the Board has adopted an articled pupils' training scheme which will ensure to those of School Certificate standard the opportunity of taking up articles with a gas engineer, with a small but progressively rising salary which will serve to remove financial difficulties in the way of entry into the technical side of the gas industry. The Board has already established an Education Committee on which Welsh Education Authorities in Wales will be invited to be represented; the Committee will have wide functions of improving the standards of general education

and training within the industry in Wales, of which the articled pupils' scheme will be a part.

The Southern Gas Board, under the Chairmanship of another newcomer to the gas industry in the person of Mr. O. R. Guard, basing its whole conception on the prime consideration that an adequate supply of gas and by-products must be effectively continued after vesting date without disturbance or upset, decided that the best working arrangement would be for a manageable number of producing undertakings to be grouped into management groups, retaining as far as possible descriptive titles similar to those now known to the consumer public, and to be run, again as far as possible, as self-contained units, with the individuals therein carrying as great a responsibility as is compatible with their duties ; it being contemplated that all boundaries between units embraced into a management group will ultimately disappear. The 13 management units thus established have been as conveniently as possible divided into the four divisions—Western, Eastern, Central, and Northern—over which, as has already been reported in the *Journal*, Messrs. J. T. Haynes, W. K. Tate, F. G. Symon, and A. Tran respectively preside as Divisional General Managers. According to the current issue of the *Gas Journal Calendar and Directory*, the annual make of gas in the four divisions is 6,230, 9,214, 5,117, and 2,908 mill cu.ft. respectively. The idea was to create groups of sufficient size to stand the expense of skilled management without losing the very important personal touch; at the same time it was felt that certain services of a less personal nature would best be performed at a higher level, and thus the Divisional Managers, with the Chairman and Deputy Chairman of the Board, have become a Management Committee to deal with such matters. Matters of policy, finance, relationship with other areas, the Minister and other Departments, and with other nationalised industries, will be dealt with at Board level, but even there the Board will have available advice on operation matters through the Management Committees.

Athough as we write it is too early to mention names it may be recorded that steps are being taken to appoint Divisional Accountants to deal adequately with the vital questions of finance. Not only have there been the problems surrounding the actual financial take over on vesting date, but there is the complicated process of integrating the accounts of the various undertakings into a common and easily understandable form, and there is also the question of introducing a budgetary cost system to give both the Management Committee and the Board an accurate running review of the financial affairs of the Board. An extremely heavy programme awaits the attention of the Board, particularly in connection with a number of small undertakings which must be improved if it is to give a first class consumer service, but it is felt that it would be unwise, at any rate for some months to come, to take any drastic action in the form of large reorganisation, but rather to confine attention to the efficient running of the undertakings as they exist today, leaving major projects to develop gradually as and when it is prudent to allow them to do so.

We are convinced that next week end's change over will be so smooth as to be practically unnoticed ; we are equally sure that those who have served the industry well in the past will be eager to serve it even more effectively in the future. Those on whom the responsibilities for service will rest in the future will remember with gratitude those who are retiring—the chairmen and directors of companies, their part-time officers, and the chairman and members of gas committees, clerks and accountants to local authorities—many of whom have rendered most valuable service over very many years. Some of those who are not remaining in the industry, as well as some who are carrying on, have views not always sympathetic on the content of the Gas Act, but all, without exception, have shown to the Area Boards, and especially to the newcomers, a degree of helpful co-operation far higher than they had even dared to hope for.

IN DEFENCE OF TRADITION

THE inauguration of the new Ponders End Works of the Tottenham and District Gas Company on April 21 was an occasion marking not only a notable step forward in the development of modern gas-making plant for meeting future needs, but the fulfilment of a personal dream. The erection of such a works was for many years in the mind of Mr. Henry Woodall, during his Chairmanship of the Company, and it is sad that his death last year robbed him of the satisfaction of seeing the completion of this fine plant, the plans for which had occupied so much of his time and interest. It was nevertheless an occasion for family pride, and most fitting that Mrs. Henry Woodall should perform the opening ceremony.

The Tottenham Company, which celebrated its centenary 18 months ago, and grew from an annual output of 6 mill. cu.ft. to its present output of 8,000 mill. cu.ft. yearly, produces gas in five manufacturing stations. Chief of these is Tottenham with a capacity per diem of 18 mill. cu.ft., and there follows Ponders End with 9 mill. cu.ft., Southgate with 6 mill. cu.ft., Hertford with 1·2 mill. cu.ft., and Hitchin with 2·5 mill. cu.ft. The first four of these are interconnected and supply the southern and more densely populated part of the Company's area, amounting to 119 sq. miles, while the Hitchin station supplies districts in northern Hertfordshire and southern Bedfordshire, thus making up the remainder of the 411 sq. miles of the Company's area of supply. This new works, built during the last three years and capable of an output of 7½ mill. cu.ft. per day, will relieve the intense pressure which had taxed the efforts of the three other interlinked works, and will, in addition, cater for the growing populations of Enfield, Cheshunt, Hoddesdon, and Waltham Abbey ; one of its principal functions, however, will be to supply gas to the 60,000 people who will eventually occupy the new town of Harlow. The laying of high pressure supply mains to Harlow will, we understand, begin this autumn.

In her remarks at the opening ceremony, Mrs. Woodall aptly referred to the works as 'a monument—one of the last—to the days of free enterprise in the gas industry,' and it was pleasing to note that this regard for tradition was echoed by Sir John Walker Stephenson, who in his capacity as Chairman of the Eastern Gas Board spoke of future policy in the industry. 'I believe,' he said, 'that a lot of traditions can be of value and can be fashioned and adjusted to meet our changing world. It is the desire of my Board to accept the inspiration of this works and build upon the traditions here set out.'

AREA BOARD PERSONNEL

VESTING Day for the gas industry is May 1 and in order that our readers may have as complete a picture as possible we have printed a 16-page Supplement giving the constitution of the Gas Boards down to "Divisional" level. The Supplement should be used in conjunction with the Area and County Classification of undertakings on pp. 125-132 of the "Calendar & Directory." All relevant details which have been published in the *Journal* up to and including April 20 are given in the Supplement, and space has been left for further particulars to be added by the user as information comes to hand.

One copy of the Supplement will be mailed to all home subscribers and to advertisers in the "C. & D." Additional copies may be purchased, while supplies last, at 7d. per copy, post free, from Walter King, Ltd., 11, Bolt Court, Fleet Street, London, E.C.4.

Personal

Mr. F. W. SAWYER, Junior Engineer with the Engineers' staff of Darlington Corporation, has been appointed Chief Chemist of Darlington Gas Department.

* * *

Mr. P. W. HOWARD, who has been General Sales Manager of the B.T.R. Group since 1930, has been elected to a seat on the Board of Directors of the British Tyre and Rubber Co., Ltd.

* * *

Mr. G. F. ILLINGWORTH, Technical Assistant, Batley Gas Department, has been appointed to the newly-established position of Distribution Superintendent.

Appointments

Eastern Gas Board

Part-time Member—J. W. NAPIER, B.SC., M.I.MECH.E., M.I.CHEM.E., ASSOC.INST.GAS E., Director, Ipswich Gas Light Company, and a Director of Fisons, Ltd.

West Midlands Gas Board

Part-time Member—A. E. HEWITT, M.C., J.P. Mr. Hewitt, who is Managing Director of W. T. Copeland & Sons, Ltd., of Stoke-on-Trent, was Chairman of the City's Gas Committee for eight years between 1935-45, when he was largely responsible for the introduction of cheaper gas for the potteries. Mr. Hewitt, a former Lord Mayor of Stoke, has been President of the North Staffordshire Chamber of Commerce since 1946, is a member of the Executive Committee of the Association of British Chamber of Commerce, and was a member of Sir Stafford Cripps' working party for the pottery industry.

Scottish Gas Board

Deputy Financial Officer—A. F. POLLOCK, M.A., B.COM, C.A., (Assistant Manager (Commercial) Edinburgh Gas Department).

Financial Officer (Glasgow Division)—J. H. DONNELLY, F.I.A.C. (Accountant, Glasgow Gas Department).

Financial Officer (Northern Division)—J. D. YOUNGSON, M.A., C.A. (Assistant City Chamberlain, Aberdeen).

Financial Officer (South Eastern Division)—J. MACNAB WEIR, F.I.M.T.A. (Town Chamberlain, Stirling).

Financial Officer (South Western Division)—A. B. BRACKENBRIDGE, A.S.A.A., (Town Chamberlain, Dumbarton).

Financial Officer (Central Division)—ANGUS MACPHERSON, C.A. (Town Chamberlain, Airdrie).

News in Brief

March Gas and Coke Company are installing 13 governors in the trunk main to improve gas pressure on the outskirts of the town.

Stockton-on-Tees Town Council has received sanction to borrow £31,950 for the laying of a 12 in. high pressure gas main from the Gas Department's works to Billingham and Haverton Hill and the erection of a high pressure holder at Haverton Hill.

Darlington Corporation's offer to the Northern Gas Board to act as agents to collect gas accounts has been turned down. The Board pointed out that it was planned to set up divisional headquarters at Darlington and it would therefore be impracticable for the Corporation to act as agents.

Middlesbrough Town Council has accepted the tender of W. C. Holmes and Co., Ltd., Huddersfield, for a Connersville meter of 150,000 cu.ft. capacity and for valves for the Gas Department; the tender of Bryan Donkin Co., Ltd., Chesterfield, for a booster; the tender of Cochranes (Middlesbrough) Foundry, Ltd., for pipes.

NATIONALISATION DINNER

A dinner has been arranged by the British Gas Staff Association to mark the nationalisation of the gas industry. The Association is aware of the mixed feelings of the staff of the industry regarding its transfer to state ownership, some welcoming it while others view it with considerable doubt. The dinner, which is to be held at the Connaught Rooms, London, on May 27, at 6.30 p.m., will be attended by the Minister of Fuel and Power, Mr. A. E. Sylvester and Colonel H. C. Smith. The Minister will be supported by Sir Donald Fergusson, Mr. R. Kelf-Cohen, and Mr. F. W. Smith, from the Ministry. The diners will, therefore, have the opportunity of hearing authoritative statements on the future of the industry and it is hoped that this function will indicate the desire of the leaders and the staff of the industry to work harmoniously together for the future success of the public service.

The British Gas Staff Association is desirous that the dinner shall be truly representative of the industry and would have liked to extend invitations to all of those who have been appointed to positions of leadership. This has not been possible, but a cordial invitation is extended to any of the staff or future and past management to apply for tickets for themselves and their ladies at £1 2s. 6d. each from the General Secretary, British Gas Staff Association, 203, Knightsbridge, S.W.7. No applications can be entertained after May 13.

FREE CHOICE OF FUELS

Now that the fuel industries are striving for the favour of the women of Britain, electricity, gas, and coal combined bid fair to become the nation's greatest advertisers in the home market, said Mr. Stanley Hopkinson (Liverpool Gas Company), who presided on April 8 at the first birthday luncheon of Liverpool Publicity Association.

He welcomed the statement by the Minister of Fuel and Power, in a message to the Women's Gas Council, that it was not his policy to dictate which particular fuel any user should employ or how he or she should use it; the Minister would like to see every consumer have the widest possible choice. That was a very welcome statement and ensured that the public would be well served because of competition.

Mr. A. Robens, M.P., Parliamentary Secretary to the Ministry of Fuel and Power, who commented on the manner in which publicity and advertising experts generally had helped the Government in connection with the various schemes, said clearly the wartime peak of Government advertising would not be maintained, but it would be at a much higher level than pre-war. The Ministry considered that every consumer should have freedom of choice as between the various forms of fuel and he personally was in wholehearted agreement with that, but it was highly important to instruct consumers as to the best means of using fuel and power in the national interest and to ensure that they knew which type of fuel and power would suit them best and was the most economical. 'I think the Government will move in that direction,' he added.

Stressing the value of advertising, Mr. Robens said: 'The man who does not advertise is like a man who winks at a woman in the dark; he knows what he is doing, but she doesn't.'

Diary

April 28.—**British Gas Council:** Annual General Meeting. Gas Industry House, 11 a.m.

April 28.—**Federation of Gas Employers:** Twenty-Seventh Annual General Meeting, Gas Industry House, 11.45 a.m.

April 28.—**Yorkshire Junior Gas Association:** Short Paper Day. J. Wilkinson (Sheffield) and C. G. Reeve (Wakefield).

April 28.—**Institute of Fuel:** Annual Luncheon, Connaught Rooms, London, 1 p.m.

April 30.—**Western Junior Gas Association:** Visit to Hollacombe Works. Annual General Meeting and Presidential Address. Torquay.

May 3.—**Scottish Junior Gas Association (Western District):** Visit to Babcock & Wilcox, Ltd. Renfrew.

May 6.—**North of England Gas Managers' Association:** Annual General Meeting, Newcastle-on-Tyne. 'Sulphur Removal,' Dr. L. A. Moignard, M.A., D.PHIL., A.R.I.C. (Gas Research Board).

May 6.—**North of England Gas Managers' Association:** Annual meeting, County Hotel, Newcastle, 2.15 p.m. Luncheon, 1 p.m.

May 7.—**Manchester District Junior Association of Gas Engineers:** Visit to Lancashire Dynamo & Crypto Co., Ltd. Three papers by staff members at Liverpool.

May 11.—**Eastern Junior Gas Association:** Visit to Colchester. Annual General Meeting.

May 13.—**London and Southern Junior Gas Association:** 'Scale Formation in Water Heaters Due to Hard Water,' R. Kerr, PH.D. (Nash & Thompson, Ltd.). Gas Industry House, 7 p.m.

May 18-19.—**Wales and Monmouthshire Association of Gas Engineers and Managers:** Annual Meeting, Colwyn Bay.

May 19-20.—**Eastern Association of Gas Engineers and Managers:** Annual Meeting, Clacton-on-Sea.

May 25.—**London and Southern Junior Gas Association:** Visit to Stanton Ironworks, Nottingham.

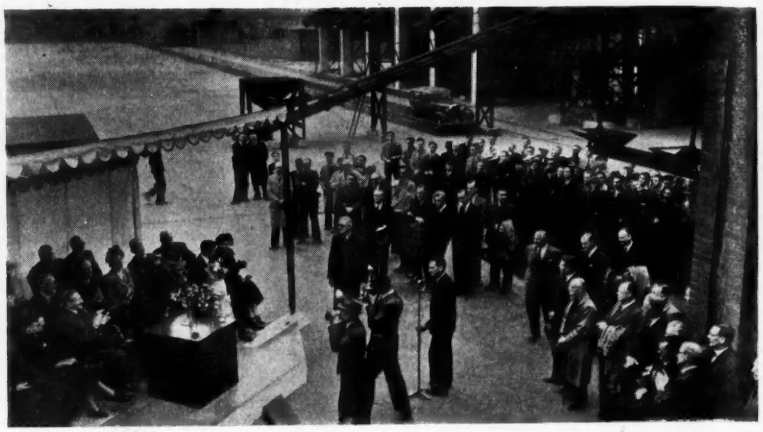
May 25.—**Manchester District Junior Association of Gas Engineers and Yorkshire Junior Gas Association:** Joint visits to Rochdale Road Works and West's Gas Improvement Co., Ltd. 'A Review of Carbonising,' Mr. Gaskill (West's Gas).

May 26.—**Midland Association of Gas Engineers and Managers:** Summer Meeting. Solihull.

May 28.—**Scottish Junior Gas Association (Eastern District):** Annual General Meeting, Kirkcaldy.

GAS WORKS— 1949 VINTAGE

The 'Gas Journal' Photographer at the Inauguration of the Ponders End Works



THE inauguration of the new Ponders End works of the Tottenham and District Gas Company took place on April 21 and was attended by some distinguished guests.

Welcoming those present, Mr. **E. C. Woodall,** O.B.E., Chairman and Managing Director of the Company, paid tribute to the contractors, and especially Messrs. Woodall-Duckham and Peter Lind, who were primarily responsible for the erection of this works, and to all those within and outside the Company who had worked so well in the designing and the erecting of this plant. Those who had had experience of constructional work nowadays would understand that they had all had to contend with many difficulties and delays, but they would agree that the result had been worth waiting for. This works was the last large enterprise in which his father was actively concerned, and his colleagues on the Board felt that it would be particularly appropriate for his mother to perform the opening ceremony. It was a very great moment for him when he invited her and she accepted.

There followed the presentation of a bouquet to Mrs. Woodall by Maureen Masters, the eight-years-old daughter of Mr. T. E. Masters, of the Works Maintenance Staff.

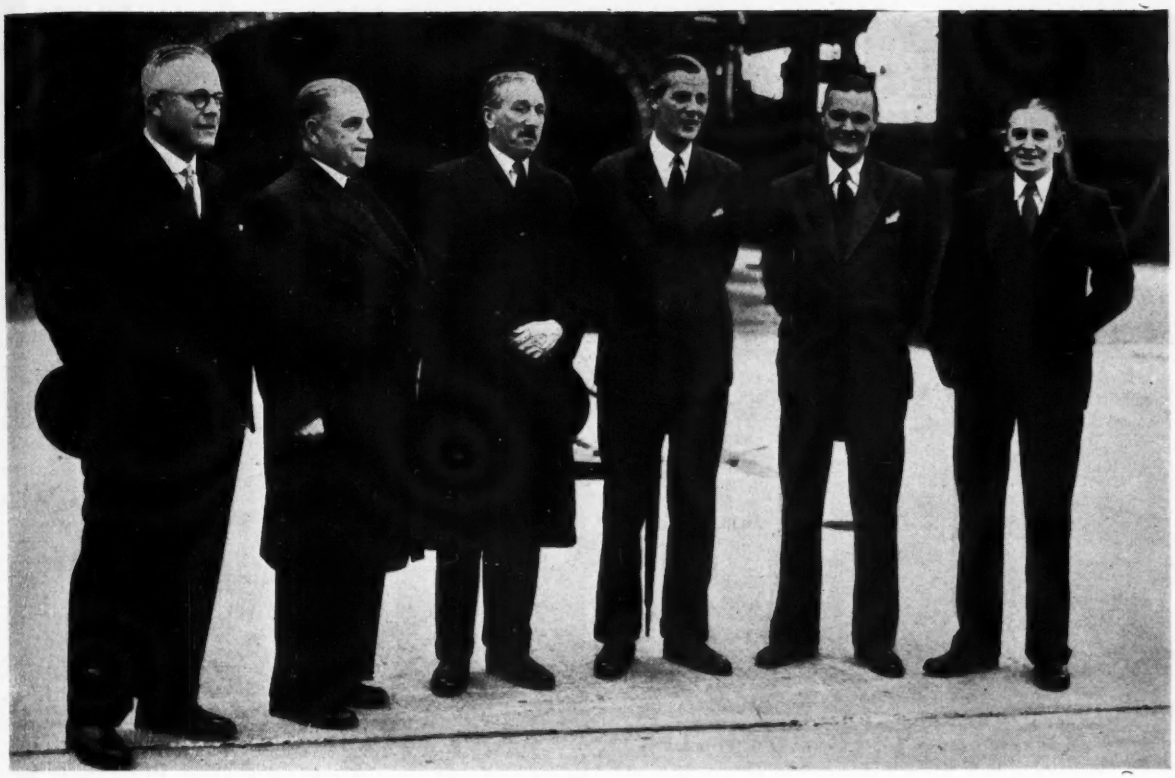
Expressing her thanks, Mrs. **H. Woodall** remarked that the Tottenham Company was very near to her husband's heart and it was a great pleasure to her to come to this magnificent new works which was planned under his chairmanship. She was an old Liberal and believed in private enterprise. This works was a monument—one of the last—to the days of free enterprise in the gas industry, and she hoped it would be an inspiration to the new organisation to carry on in the spirit of service and fair dealing which had for so long animated their great industry and which, for over 50 years, she had known and admired.

Mrs. Woodall then pulled a lever which discharged one of the chambers and declared the Ponders End works open.

Col. **H. C. Smith,** C.B.E., D.L., J.P., Deputy Chairman of the Gas Council and Deputy Chairman of the Tottenham Company, thanked Mrs. Woodall, and said that he was sure all would agree that it was most proper that Mrs. Woodall should declare the works open. The majority of them would remember with affection their old Chairman, and Mrs. Woodall had mentioned how keenly he was interested in the planning of this works. He could, more than anyone, substantiate what she had said, and he counted it a privilege, five years ago, to have discussed with Mr. Woodall the form this new works should take. The detailed design of it fell to many men, and in particular Mr. Ledingham, Mr. Rose, and Mr. Gedge, who was at that time Chief Draughtsman.

The above photograph shows Sir John Walker Stephenson, Chairman of the Eastern Gas Board, at the microphone.

The happy group at the left comprises some of the ladies of the party discussing the event in the new office block. They are, left to right: Mrs. H. G. Palmer, Mrs. E. J. K. Fussell, Mrs. C. A. Deas, Mrs. H. C. Smith, Mrs. E. C. Woodall, Mrs. J. A. King and Mrs. R. H. Epps.

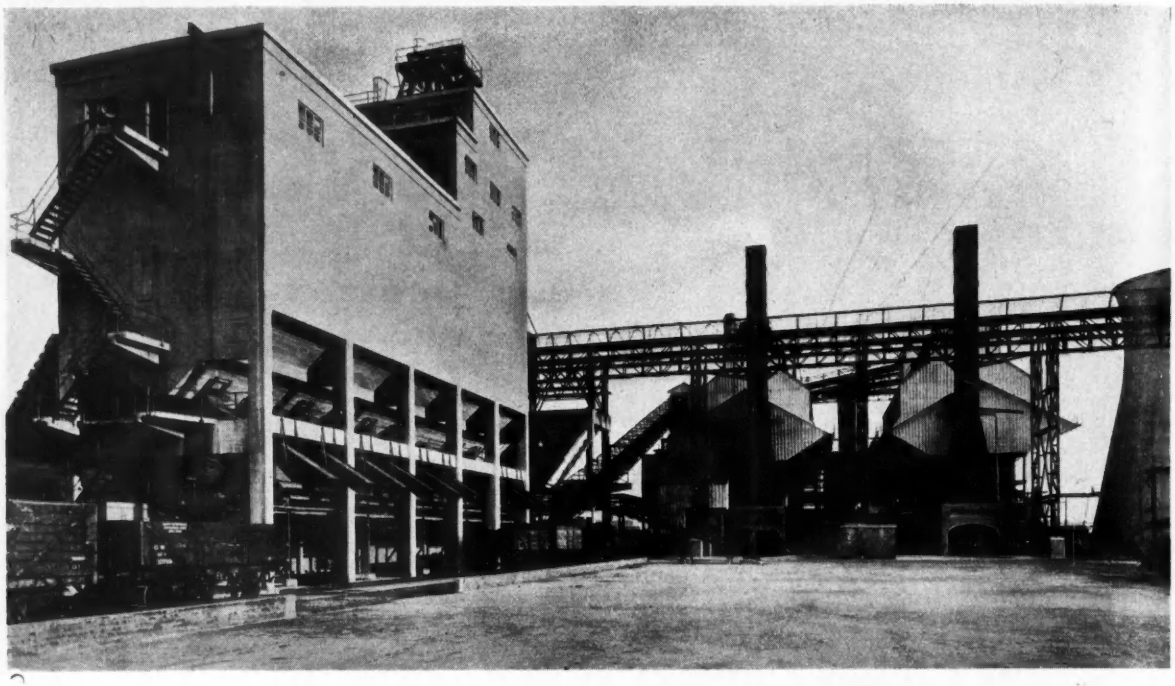


Members of the Eastern Gas Board: Messrs. R. H. Epps, Sir John Walker Stephenson, C.B.E., Col. H. C. Smith, C.B.E., E. C. Woodall, O.B.E., J. H. Dyde, and H. R. Hazeldine.

and they, together with the contractors, had done a first-class job of work. The works was the finest new gasworks in England—which meant in the world—and they were all proud of it. However, their pride was tinged with a certain amount of regret that those who had had some part in planning the works must leave it to others to operate. While they had known for some time that they would not benefit as a result of their efforts and that others were coming along to take over what they had done, they were determined to hand over a first class show. They were very fortunate in that area in having as the new Chairman, Sir John Stephenson, who was going to do everything possible to carry on the tradition of the fine old Tottenham Company. Although changes must be made, they were being made in a direction which was going to ensure the happiness and contentment of all employees in the future.

Sir **John Walker Stephenson,** C.B.E., J.P., said he counted it a personal duty to be present and admire the ingenuity which had gone into the production of such a wonderful edifice. He was glad to have learnt something of the traditions of the great Tottenham Company and of its gradual beginnings and early development and struggles. He was sure that every modern Englishman must stop and give thanks to the pioneers who, in spite of every sort of difficulty, by their forethought and imagination produced this industry. He, like Mrs. Woodall, was extremely fond of traditions and he believed a lot of traditions could be of value ; they could be fashioned and adjusted to meet the changing world. It was the desire of his Board to accept the inspiration of this magnificent works and build on the traditions here set out. He hoped the workmen would feel that the change was not to their disadvantage. He would like to say how much the country owed to Mr. Henry Woodall, and he hoped that those who were to follow would prove worthy of this great business gentleman. All would regret that he was not present to see the fulfilment of his great ideal.

A particularly happy moment of the afternoon is illustrated in the left-hand photograph above, when a pensioner of the Company, Mr. William Wright, was presented to Mrs. Woodall. The other photograph shows Mrs. Woodall, her task completed, leaving the works with Mr. E. C. Woodall and Col. H. C. Smith.



THE PONDERS END WORKS

THE first gasworks at South Street, Ponders End, was built by the Ponders End and Enfield Highway Gas Company in 1859. This Company was amalgamated with the Enfield Gas Company in 1879, which in turn was amalgamated with the Tottenham Company in 1913.

The Ponders End works was partially remodelled in 1920. In 1945 it was capable of a daily output of 3 mill. cu.ft. but the whole of the coal gas section was obsolete and the carburetted water gas section consisted of three small manually operated sets. The total area of the site was 19.7 acres, but only about one quarter of this was occupied.

In 1941 proposals were made for the reconstruction of the whole works but the execution of these was prevented by the conditions prevailing at that time. Towards the end of 1944 alternative schemes for a horizontal retort house and an intermittent vertical chamber oven installation were prepared and after competitive tenders had been received, it was decided, in February, 1945, to proceed with the installation of an intermittent vertical chamber plant together with ancillaries and purification plant to form a complete new gas making section of 7.5 mill. cu.ft. per diem capacity.

The existing carburetted water gas plant is being retained for the time being, but it is planned to replace this with an entirely new plant having two fully automatic sets with a total capacity of 5 mill. cu.ft. per diem.

The New Installation of Intermittent Vertical Chambers

The new installation, which has been built by the Woodall-Duckham Vertical Retort and Oven Construction Company (1920), Ltd., comprises two benches each containing five settings of fully-recuperative W-D intermittent vertical chambers. Each setting contains six chambers, a step-grate producer, and a counterflow recuperator. There are thus 60 chambers in all. The installation is provided with a complete coal and coke handling plant, a coke screening and storage plant, an ash handling plant, a producer gas dilution plant, and three waste heat boilers.

The chambers are rectangular in plan and about 21½ ft. high, 10 ft. long, and 12½ in. wide at the bottom. Each chamber has a capacity of approximately 3¾ tons of coal per charge. The chambers are charged and discharged at intervals of about 11 hours, and in these circumstances have a maximum daily capacity of 469 tons of coal and can produce 6,046,000 cu.ft. of 560 B.Th.U. gas. By diluting with producer gas the daily production can be increased to 7,076,000 cu.ft. of 496 B.Th.U. gas per day. The chamber walls and heating flues are constructed in silica and are finished at the top and bottom with a course of fireclay blocks. Any setting can be let down cold or heated up without affecting the working of other settings.

A special feature of the bracing of the settings is the use of water-cooled tie rods through which softened water flows to the waste heat boilers.

The chambers are heated by the lambent heating system using hot producer gas.

Coal is brought into the works in railway wagons on the private siding adjacent to the main line. The wagons are hauled by a Diesel locomotive into the tippler house where, after lowering roller shutters to complete the enclosure of both wagon and tippler and thus prevent any dust nuisance, the coal is discharged into a receiving hopper beneath the track. The wagon tippler, which is of the electrically operated rotary type manufactured by Messrs. Strachan and Henshaw, has its controls interlocked with the mechanism of the roller shutters so that it is impossible to discharge a wagon unless both shutters are down. From the receiving hopper the coal is delivered by a sure feeder to either of two single roll Jeffrey coal breakers which reduce it to a maximum product of 2 in. cube. Chutes are provided to enable small coal to completely by-pass the breakers.

The coal from the breakers or by-pass chutes is received by two cased-in bucket elevators of the roller chain type, one of which serves each breaker. The elevators raise and discharge the coal either on to the push plate conveyor above the north bench or on to a 24 in. cross-band conveyor, which in turn discharges on to the push plate conveyor above the south bench. Each of the breakers, elevators and push plate conveyors is capable of dealing with 80 tons of coal per hour. The coal storage hoppers are of a capacity equal to 48 hours supply for their respective benches and each range is fitted with 12 sets of discharge chutes for delivering coal to the chamber charging car.

The coke required for the chamber producers is discharged as required by means of a chute into a top-hung, hand-propelled skip arranged to travel over the producers. From this skip the coke is charged direct into any producer. Each bench is provided with an Avery weigher and totaliser which automatically weighs and records all fuel fed to the producers. The producer charging skip on the north bench also supplies the fuel required by the dilution gas producers.

Each chamber is provided with a bottom gas offtake leading into the bottom collecting main, three of which are provided for each bench. The bottom gas offtake is designed to function during the early stages of the carbonising period when gas evolution is exceptionally rapid.

The gas from the bottom collecting mains passes through uptakes into the top collecting main where it combines with the gas issuing from the top of the chambers. To avoid a large pressure differential each top collecting main is provided with

two gas outlets which are coupled together by a balancing main through which the gas passes to the foul main. The mains of each bench are fitted with a Peebles automatic safety relief valve and with a blow-off pipe so that the mains may be cleared of air at starting up times. An Askania regulator operating a butterfly valve is fitted to the foul main of each bench to control the pull on the chambers.

Special attention has been paid to the recovery of waste heat from the combustion gases from the heating flues of the chambers. After passing through the recuperator and preheating the secondary air the gases are taken out into a waste gas main which consists of a circular steel casing lined with insulating firebrick. There are two such mains, one for each bench, which join into a common main at the coaling end of the benches. From this main the gases pass either direct to the two chimneys or to the three waste heat boilers, of which any two are normally in operation with the third acting as a standby.

The boilers are of the Woodall-Duckham horizontal fire-tube induced-draught type designed for a working pressure of 120 lb./sq. in. A superheater capable of giving an additional superheat of 100°F. is arranged in the inlet flue of each boiler.

Coke Handling and Screening Plant

A comprehensive coke handling and screening plant has been installed to deal with the coke produced in the intermittent chamber installation. The coke, after being quenched in the hot coke skip, is hauled into the yard where the skips are handled by a transporter machine. These machines, of which there are two, one acting as standby, are of the electrically driven, remote controlled, automatic type manufactured by Messrs. Strachan and Henshaw, and they hoist and transport the skips of coke either to the elevated coke wharf or to open storage in the coke yard. A twin skip hoist, which has a capacity of 40 tons of run-of-chamber coke per hour, elevates and discharges the coke into the reinforced concrete receiving hopper above the screening plant. From the receiving hopper, the coke can be fed into either of two cutting and screening units, arranged in parallel, above the storage bunkers. Each unit, either of which forms a standby to the other, has a capacity of 40 tons of coke per hour and comprises a rotary feeder, a primary scalping screen, a cutter, and a secondary grading screen.

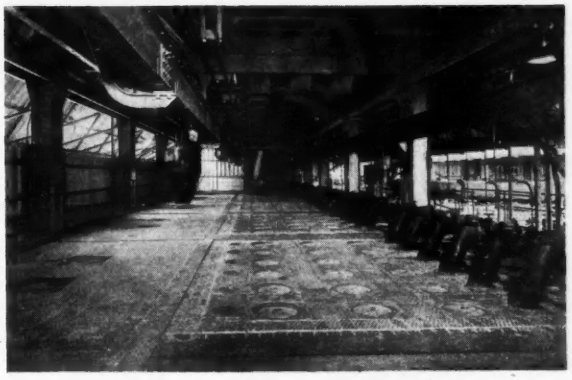
In each unit the coke is fed by the rotary feeder to a Cort balanced reciprocating scalping screen which scalps all coke over 2⅞ in. in size. This oversize coke passes either into a 'Phœnix' adjustable cutter or through a by-pass chute and down a spiral chute direct into the large coke compartment of the storage bunkers beneath. The undersize coke from the scalping screen, together with any cut coke from the cutter, is delivered to a secondary Cort balanced reciprocating screen. On this screen which is 53 ft. long, the coke is graded into four sizes, 0-⅝ in., ⅝-1½ in., 1½-1⅞ in., and 1⅞-2⅞ in. These sizes are delivered direct into their respective compartments in the storage bunkers beneath, a spiral chute again being provided for the largest size. Each compartment of the bunkers, except that containing breeze, has four outlets forming two lines of loading chutes, one feeding rail traffic and the other road traffic. Each of these outlet chutes —there are 16 in all—is fitted with an A.C.E. mechanical debreezing. Four 'Belle Isle' weighing and bagging machines are provided on the platform.

The ashes from the producers are loaded into hand-propelled monorail skips and taken into the works yard where, by means of a skip hoist, they are discharged into an elevated ash bunker for loading into road vehicles.

Producer Gas Dilution Plant

The crude coal gas made in the chamber plant is diluted by the admixture of washed producer gas. The gas is generated in three Woodall-Duckham step-grate producers built as a separate battery at ground floor level at the end of the north bench. The producers are worked under pressure and are capable of producing 50,000 cu.ft. of gas per hour. Any two producers are thus easily capable of generating sufficient gas to meet the dilution requirements of the complete installation. The producers are arranged so that any one may be shut down without interfering with the working of the others. The hot gas from the producers flows through a refractory lined steel producer gas main into a gas washer and cooler. The main is provided with a dust pocket from which any deposited dust carried over from the producers can be removed via a chute and valve. The gas washer, which is of the water sprayed hurdle type, removes any dust remaining in the gas and also cools the gas. To maintain the correct proportioning of producer gas and coal gas an electric motor operated butterfly valve is provided in the clean producer gas main. The motor is remote controlled by push buttons installed in the calorimeter room. An 'Electroflo' regulator controls the pressure of the steam for the producer air inlet venturis.

All power operated units on the coal handling plant and the coke handling and screening plant are driven by totally enclosed dust-proof gasworks type electric motors, electrical sequence interlocks being provided to prevent these units from being started or stopped out of their proper order. The waste heat boiler turbines and feed water pumps, the hydraulic pumps, the liquor pump engine, the Askania regulator turbines and the pumps supplying the water-cooled tie-rods are steam driven. The exhaust steam from the fan turbines is utilised in the feed water heaters while the exhausts from the liquor, hydraulic, feed and tie-rod pumps provide the low pressure steam required for the producer grates. Four Askania pressure reducing regulators are provided to control the pressure of the steam supplied to the chambers and to the producer air inlet venturis.



A view of the top of the chambers.

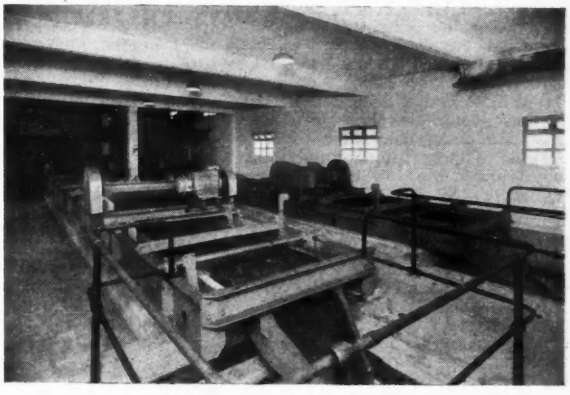
The whole of the steam required for the chambers, producers, and steam driven units is generated in the waste heat boilers, and when two boilers are in operation, there is a surplus of some 7,000 lb./per hour available for other purposes.

To assist the maintenance of cleanliness a vacuum cleaning plant has been provided with hose coupling points distributed throughout the various operating platforms of both chamber benches.

Ancillary Plant

The condensers, which were constructed by Messrs. C. & W. Walker, Ltd., are of the horizontal tube type and have a total cooling surface of 20,000 sq. ft. They are arranged in three units, two of which operate upon recirculated water at 75°F., while the third is supplied with softened well water at 55°F.

The water cooling tower is of concrete construction built by the Davenport Engineering Co., Ltd., and it is rated to cool 140,000 gall. of water per hour from 95°F. to 75°F. with an atmospheric wet bulb temperature of 65°F.



The secondary coke screens.

The power house contains the exhausting machinery and electric generating plant and forms the control point from which the whole of the purification plant is operated.

There are two Holmes-Connersville exhausters, each rated at 375,000 cu.ft. per hour, and two 100 kW Lancashire alternators, all driven by Bellis and Morcom compound steam engines. Except for two old Lancashire boilers which are kept available for starting up, and the boilers attached to the old C.W.G. plant, the only steam generated is that derived from the waste heat boilers in the chamber plant. All steam surplus to that required for the chambers is passed to the power house and is used for driving the exhausters and for generating electricity. The

remainder of the electric power required for operating the works is purchased from the Eastern Electricity Board, whose 500 kN.a. sub-station adjoins the power house. The alternators installed can generate sufficient power to maintain the minimum essential plant in operation in the event of a failure in the public supply.

Adjoining the power house are the laboratory and calorimeter room. In addition to Fairweather and Boys calorimeters, Sigma instruments give continuous records of the calorific values of the various gas streams.

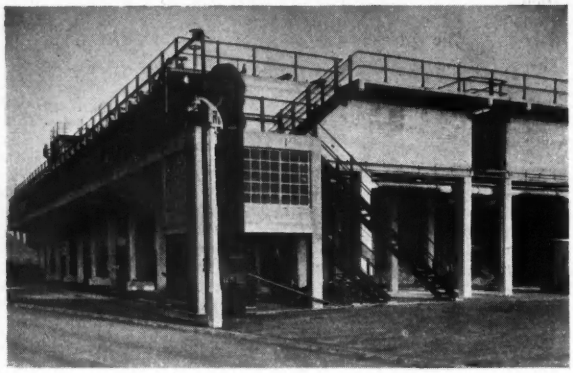
The electrostatic detarring plant, manufactured by Whessoe, Ltd., is duplicated throughout. Each of the two units is rated to pass 8 mill. cu.ft. per diem.

There is one 8 mill. cu.ft. per diem Livesey washer built by Clapham Bros., Ltd.

The ammonia washing plant, built by W. C. Holmes & Co., Ltd., is of the 'static' type and consists of three units arranged in series, each unit containing four washing bays. Two units are sufficient for dealing with a stream of 8 mill. cu.ft. per diem.

The purifiers are constructed of reinforced concrete and are to the Company's own design. Peter Lind & Co., Ltd., were the main contractors for the work and the whole of the ironwork was sublet to Newton Chambers & Co., Ltd.

Each of the four purifying streams is fitted with a Holmes-Connersville meter and these four meters take the place of a



The tower purifiers.

station meter. The rate of flow measured by these meters is repeated in the power house and the total quantity of gas passed is recorded in the booster house.

A special feature of this installation is the type of bolt used for holding down the purifier covers. These bolts are of the swivel type and are lubricated internally with grease. This type of bolt has been used by the Company for the past 20 years and its use has entirely eliminated the frequent renewals found necessary when the usual eyebolts are employed. Another special feature is the use of flexible joints in the gas connecting mains. A Johnson flange adaptor has been inserted in each main leading to every inlet and outlet connection. Provision is thereby made for expansion, and distortion of the valve casings on this account is thus avoided. There is also a Johnson coupling on every inlet and outlet connection as it enters the box. The removal of one of these couplings discloses a clear break in the main which provides an air break between valves and boxes. This is in accordance with the recent recommendations of the Safety Rules Committee of the Institution of Gas Engineers.

The benzole extraction plant was built by W. C. Holmes & Co., Ltd., and is of the oil washing type with vacuum distillation. It operates on an oil rate of 10 gall./1,000 cu.ft. and is rated to extract 90% of the available benzole from 11 mill. cu.ft. of gas per diem.

Gas drying is carried out at the holder outlet and the plant, constructed by W. C. Holmes & Co., Ltd., is capable of operating at a maximum hourly rate of 1.25 mill. cu.ft.

The new booster house contains seven compressing sets as follows:—

Three Holmes-Connersville sets each rated at 000,000 cu.ft./hour by 30 W.G. differential pressure, driven by 60 B.H.P. Ruston oil engines through Vulcan-Sinclair fluid couplings.

Three Reavell rotary compressors each rated at 90,000 cu.ft./hour to 13 lb./sq. in. Two of these are driven by 112 B.H.P. National gas engines and the other is driven by an electric motor.

One Holmes-Connersville set rated at 50,000 cu.ft./hour to 1.5 lb./sq. in. and driven by an electric motor.

Instrumentation throughout the works has been designed upon a uniform basis and executed by Electroflo Meters, Ltd.

The new Welfare Block provides, on the ground floor, washing and locker accommodation for all workers. Special changing rooms are provided for men working on purifiers. Contamination of clothing belonging to other workers is thereby avoided. There is also a First Aid room. On the first floor there is a canteen and fully equipped kitchen.

Separate accommodation is provided in the chamber house for shift workers occupied in that locality.

The new workshops are provided with all the machine tools required for the maintenance of the works and there are also shops for electricians and building trades.

LIST OF CONTRACTORS

Carbonising plant (including coal and coke handling plant).—Woodall-Duckham Vertical Retort and Oven Construction Co. (1920), Ltd. (transporter, tippler, coke hoist by Strachan and Henshaw, Ltd.; coal handling plant by Mitchell Engineering, Ltd.; band conveyors by Spencer (Melksham), Ltd.; coke wharf and bunkers by Peter Lind & Co., Ltd.; coke screens by Robert Cort and Son, Ltd.; debreezing screens by A.C.E. Machinery, Ltd.; lift by William Wadsworth and Son, Ltd.; vacuum cleaning plant by Sturtevant Engineering Co., Ltd.; lagging by Newalls Insulation Co., Ltd.).
Water cooling tower.—Davenport Engineering Co., Ltd.
Exhausters.—W. C. Holmes & Co., Ltd. (engines by Belliss & Morcom, Ltd.).
Electric generating plant.—Lancashire Dynamo & Crypto, Ltd. (engines by Belliss & Morcom, Ltd.; switchgear by Geo. Ellison, Ltd.).
Mercury arc rectifier.—Hewittic Electric Co., Ltd.
Air blowers.—Reavell & Co., Ltd.
Power house air conditioning.—Drummond Patents (Holdings), Ltd.
Electrostatic detarrers.—Whessoe, Ltd.
Livesey washer.—Clapham Bros., Ltd.
Ammonia washers.—W. C. Holmes & Co., Ltd.
Purifiers.—Peter Lind & Co., Ltd. (ironwork sub-contracted by Newton Chambers & Co.).
Meters, benzole extraction plant, gas drying plant, and boosters.—W. C. Holmes & Co., Ltd.; Reavell & Co., Ltd.
Booster engines.—Ruston & Hornsby, Ltd. (couplings and gears by the Hydraulic Coupling and Engineering Co., Ltd., and David Brown, Ltd.); National Gas and Oil Engine Co., Ltd.
Coal store tippler.—Strachan & Henshaw, Ltd.
Coal store transporter.—Babcock & Wilcox, Ltd.
Coke store conveyors and oxide breaker for purifier.—Crone & Taylor, Ltd.
Railway material.—Thos. Summerson & Sons, Ltd.
Railway tracklaying.—Fairclough & Co., Ltd.
Tar and Liquor storage tank and water storage tower.—Peter Lind & Co., Ltd.
Deep wells and pumps.—Le Grand, Sutcliffe & Gell, Ltd. (pumps by James Beresford & Son, Ltd.).
Water softeners.—Permutit Co., Ltd.
Water treatment for boilers.—Neckar Water Softener Co., Ltd.
Pumps for water, liquor, &c.—Lee Howl & Co., Ltd.
Water meters.—Leeds Meter Co., Ltd.
Pipe gantry and structural steelwork for buildings.—Power's & Deane, Ransome's, Ltd.
Pipes for gas, water, &c.—Stanton Ironworks Co., Ltd.; Staveley Iron & Chemical Co., Ltd.
Gas valves.—Westwood & Wrights, Ltd.
Cocks for tar, liquor, &c.—Audley Engineering Co., Ltd.
Mainlaying and excavations.—William Press & Son, Ltd.
Steam piping.—Foster Bros., Ltd.
Steam valves.—Hopkinsons, Ltd.; Vee Reg. Valves, Ltd.
Instrumentation.—Electroflo Meters Co., Ltd.
Laboratory Fitting.—Griffin & Tatlock.
Laboratory instruments.—Alexander Wright & Co., Ltd.; Sigma Instrument Co., Ltd.; Scientific and Projections, Ltd.
Electric motors.—Lancashire Dynamo & Crypto, Ltd.
Electric starters.—Brookhirst Switchgear, Ltd.
Electric sub-switchgear.—Sanders & Co. (Wednesbury), Ltd.; Walsall Conduits, Ltd.
Electric cables.—British Insulated Callender Cables, Ltd.; Pyrotenax, Ltd.
Roadways, foundations and concrete work, general.—Peter Lind & Co., Ltd.
Drain pipes and fittings.—Stanton Ironworks Co., Ltd.; John H. Turner & Lisney, Ltd.
Manhole covers and floor duct covers.—Dover Engineering Works, Ltd.
Boundary fencing.—Penfold Fencing Ltd.
Entrance gates.—Structural & Mechanical Development Engineers, Ltd.
Weighbridges.—W. T. Avery Ltd.
Travelling cranes.—Herbert Morris, Ltd.
Building, brickwork, plastering, plumbing, painting, &c.—Yeomans & Partners, Ltd.
Bricks and tiles.—Accrington Brick & Tile Co., Ltd.; J. Knowles & Co. (Woodenbox), Ltd.
Glascrete windows.—J. A. King & Co., Ltd.
Roof sheeting.—Robertson Building Service.
Revolving doors and joinery.—T. B. Colman & Sons, Ltd.
Roller shutters.—Haskins Ltd.
Heating and ventilating plant.—Davidson & Co., Ltd.
Radiators.—Ideal Boiler & Radiator Co., Ltd.
Canteen kitchen equipment.—R. & A. Main, Ltd.
Messroom and canteen furniture.—Kingfisher, Ltd.
Clothes lockers and steel shelving.—Waddells (Stratford Steel Equipment) Ltd.
Sanitary fittings.—William E. Farrer, Ltd.
Lighting fittings, gas.—Concrete Utilities, Ltd.; W. Sugg & Co., Ltd.; Horstmann Gear Co., Ltd.
Lighting fittings, electric.—Holophane, Ltd.; Benjamin Electric Ltd.; Walsall Conduits, Ltd.
Workshop machines.—Drummond-Asquith (Sales), Ltd.; Holbrook Machine Tool Co., Ltd.; Joshua Heap & Co., Ltd.; A. C. Wickman, Ltd.

The New Works in Perspective

The gas is produced by the Tottenham and District Gas Company in five manufacturing stations:—Tottenham, capacity 18 mill. cu.ft. per diem.; Ponders End, 9 mill. cu.ft. per diem.; Southgate, 6 mill. cu.ft. per diem; Hertford, 1.2 mill. cu.ft. per diem; and Hitchin, 2.5 mill. cu.ft. per diem.

The first four of these are interconnected and supply the southern and more densely populated part of the Company's area of supply, amounting to 119 sq. miles. The Hitchin station supplies districts in northern Hertfordshire and southern Bedfordshire which make up the remainder of the 411 sq. miles of the Company's area of supply.

MANCHESTER DISTRICT ASSOCIATION OF GAS ENGINEERS

PRESIDENTIAL ADDRESS*

of

J. D. ASHWORTH, M.I.MECH.E., M.INST.GAS E.,

Engineer and Manager, Blackburn Corporation Gas Department

THE Association has done me a great honour in electing me to this Chair.

When I look back to the days when I first became an active member of this Association, I am conscious of the high regard in which our Presidents were held. Each succeeding year brought a new occupant to this office, but the level of excellence never fell, and thus to-day I feel not only the honour, but also the duty of preserving the dignity and high respect in which this office of President of the Manchester District Association of Gas Engineers is held. These, Gentlemen, are the responsibilities I shall do my utmost to preserve, and when, in due time I hand over my office to my successor I hope he will be able to say of my year what we all think of our immediate Past-President. Mr. MacLusky has adorned this Chair and maintained the proud position which this Association holds in the industry, throughout the country.

The problem which besets any President-elect is that of preparing his Presidential Address. This task is his first duty, it lies upon him as a heavy burden, for by it his stature is measured. To-day any man may be excused for shrinking from this task, and yet the necessity for one elected to this office to speak, to offer counsel to the younger members of the Association, to be wise in his choice of words, and mode of expression, so that his fellow Engineers can take his thoughts away with them, is imperative.

The Association and the Institution

We are standing on the very threshold of our new era, and many readjustments will have to be made. This Association has become an organisation of many parts. Some of these activities and functions may now cease, and therefore some consideration of these various activities and their origin and purpose will be valuable at this time. In recent weeks the question of the future of Associations such as this has been ventilated through the columns of the Technical Press. This matter has been exercising the minds of the Associations to a more or less degree for some months and I make no apology for taking this subject as the central feature of this address.

In times past Presidents have been able to select from a multitude of subjects or have felt able to survey the industry from a variety of angles and thus have presented a picture of the industry from the technical or economic point of view as their interest directed.

Our future is at the present somewhat obscured and until the Area Boards are in a position to announce the policies upon which the industry is to be organised the individual engineer may be excused for a somewhat hesitant approach to the problems confronting him.

I am constrained to ask myself questions which I am sure are exercising the minds of most others.

The Commercial Sections are affiliated to our Association. Their finance is supplied by the various undertakings, who form their Membership, and therefore these sections will be dissolved, their activities being assimilated by the Area Board. Here one is perhaps permitted to reflect that the pool of experience which has accumulated could with advantage be used by the Area Board.

The Gas Engineer has built up a personal and often close relationship with the leaders of thought, business, and professional interest in his own area. Even where his undertaking has grown largely, the Gas Engineer has maintained close links with the various activities within his area of supply.

The Association and the Gas Act

Now there is a section of the Act, that relating to the setting up of the Consultative Council, which while it may not seem to affect us closely, is in fact of considerable importance in the day to day execution of our business. *Clause 9* of the Act describes the Consultative Council.

The Chairman appointed by the Minister is to be a Member of the Gas Board.

Now the method of appointing the members of these Councils which shall consist of 'not less than twenty, nor more than thirty other members appointed by the Minister' is that: 'Not less than half nor more than three-quarters shall be appointed from . . . . persons nominated from amongst members of Local Authorities. The remainder shall be appointed after consultation . . . . to represent commerce, industry, labour and the general interests of consumers of gas and other persons or organisations interested in the development of gas.'

In *Standing Committee 'D'* the question of the method of appointing the Chairman was debated at some length. The proportion of Local Government nominees was also raised and the basis of the Minister's argument, in fact his final statement, is worth quoting here as it has an important bearing in my opinion on the future relations between ourselves and the Local Authority, particularly if these remarks are considered in relation to other sections of the Act. It will be as well to mention these now, and consider the question in this context afterwards.

The discussion in Standing Committee had been directed to the upper limit for Local Government representation. The discussions on the Electricity Bill were cited and comparisons drawn. In contrasting the two cases the Minister said (*Parliamentary Debates, Standing Committee D., Eighth Sitting, Page 379*): 'The difference is simply that a much higher proportion of the consumption of gas is domestic in contrast with electricity and therefore we felt that there was a case for having, in certain circumstances, a higher Local Authority representation than in the case of electricity,' . . . . and finally on *Page 380*: 'It is not a question of a larger consumption, but a larger domestic consumption of gas.' *Clause 9, sub-section 8*, widens the sphere and scope of the Consultative Councils in such a way that they can act as the centre of a widespread information system. Although somewhat long it is worth quoting in full:—

'Every Gas Consultative Council shall prepare and submit to the Minister a scheme for the appointment by them of Committees or individuals to be local representatives of the Council in such localities as may be specified in the scheme, and it shall be the duty of such Committees or individuals to consider the particular circumstances and requirements of those localities with respect to the supply of gas, and to make representations to the Council thereon and to be available for receiving on behalf of the Council representations from consumers in these localities and if the scheme is approved by the Minister, the Gas Consultative Council shall put it into effect. A member of a Gas Consultative Council shall be eligible for appointment under such a scheme, either as a member of a committee or as an individual, but membership of the Council shall not be a necessary qualification for such an appointment.'

If the range of activity of the Consultative Councils is considered, it will be seen that, firstly they are directly concerned with the development of policy of the Area Boards, for *Clause 9 (5)* says, "Each of the 'Gas Consultative Councils shall be informed by the Area Board of the Board's general plans and arrangements for exercising and performing their functions under this Act' . . . . and as we have seen from *Clause 9 (8)* just recited they can spread out into every centre of population. It would seem, therefore, that the 'Committees' envisaged by this sub-section will most likely be found from within the local Councils, for they are the democratically elected representatives of the community.

Local Authority

Now if the intention to prevent too much over-centralisation is to be achieved, and, in fact, if decentralisation is to be the aim of the Area Boards then a considerable degree of autonomy must still rest with the individual undertakings, and this may mean a certain degree of contact between the executive and the local committee. The opposite of this will mean that frustration and irritation must arise if local questions are to be referred in every case to the Consultative Committee, and from this body to the Area Board. In effect, therefore, we can have the local Gas Committee shorn of all administrative responsibility and its implications but endeavouring to obtain for its electorate all the things with which it is at present charged. The task of these local bodies if set up will be difficult if a balanced judgment is always to be given, but it would seem the contacts, and to some extent the exchange of information at this level will benefit the consumer, the particular undertaking, and the central directive, the Area Board. The duties of the man on the spot are therefore likely to be no less onerous, in fact the necessity to visualise the possibilities of this development are of the greatest importance.

* Delivered in Manchester, April 22, 1949.

The relationships between the local executive of the Board and the Local Authority will be of more value than hitherto. The idea that nationalisation results in a machine, moving without consideration to the needs of the ordinary man, the smaller consumer, can grow until all idea of the community of effort is lost. The gas industry has always aimed at, and very largely obtained, the goodwill of the individual consumers large and small. This valuable asset must not be lost and need not be lost, in fact the machinery to prevent this loss, the machinery to foster its continual growth is available and can become one of the greatest features of the Act.

A nationalised industry demands enthusiasm at every level, and without this, in my view, it must fail. This statement would seem to require some little elaboration. It has been a charge levelled at municipal control of trading departments that the tendency to sit back, to let the stream carry the raft, always develops, and sometimes gets a stranglehold on the departments.

Leadership

The tendency is less marked in private enterprise, although monopolistic industry such as the gas industry was, and in some ways, still is, having to face this evil. The great fear of nationalistic enterprise is just that fatal tendency to sit back, to pass responsibility, to tie problems and queries up by interminable documentation or red tape. The modern tendency to decentralise which has shown itself in the large combines aims at preserving local initiative and responsibility. This can be done, and is being done, with some considerable degree of success, but decentralisation can only be carried so far and at some point reaches its end. Whatever form of control is adopted there will always be the feeling that the 'higher ups' must take the ultimate responsibility and this, of course, is true to a point. Leadership and enthusiasm can be encouraged and its growth increased only if the leadership at the top is of that supreme quality which inspires determination and zeal at all levels throughout the organisation.

The capacity for hard work, the energy of the enthusiast, are excellent in themselves, but this is not true leadership. The quality required at all levels will be a passionate belief in the value of the work, and the service given, but this becomes a consuming interest, possessed by few.

The individual in control of a local undertaking must feel himself part of a greater whole, must conceive his work as a part of a truly national service, otherwise the lack of power will lead to a deadening of interest and thus to an assumption of ease. The industry must gather to itself a part of the young talent if it is to continue to grow in its capacity to serve the public. No eager and zealous young man will enter an industry unless he sees possibilities opening before him. The qualities possessed and demonstrated daily by his seniors will be an example he will unconsciously adopt. Thus, leadership, inspiration and initiative, are qualities of greater importance now than ever before. The organisation must enable these attributes not only to be preserved but encouraged. If this view is correct, what then is to be the position of the individual within the area and the industry. To a large extent this will depend upon his ability to meet his fellow engineers, not merely for the consideration and discussion of technical papers, but also for the interchange of personal ideas and views.

The Value of an Association

This leads again to a discussion of the value of the Association as it now stands, and its probable value under the proposed set up, that is, as a section of the Institution.

Among the advantages we can claim are the facilities which have existed for visits to other gasworks, to the works of plant manufacturers, where new constructional methods have proved of considerable benefit to the engineer in his practice.

Many valuable papers have been presented to the Association and by men, who might not have done so had their productions been subject to the scrutiny of a papers Committee before they could be published or circulated.

How are we to organise our visits in the future, can we still look forward to the inspection of new processes? As at present organised, we are a purely independent professional organisation, our society is financed by our own personal subscriptions. To this extent we are an Association of men joined together for our mutual benefit. We have a tradition, a valuable asset not lightly to be thrown away.

The reorganisation of our Association as a section of the Institution requires the consideration of many factors, touched upon by the Technical Press recently. These problems have been under consideration by the Council of the Institution and others, and their magnitude and complexity will not be resolved by independent consideration.

There remains to be considered the question of the boundaries of the reorganised Associations if the final decision leans to the formation of Sections of the Institution. The fact that the existing Associations find their membership in two or three of the areas circumscribed by the Gas Act will not in itself be an objection, it can be a decided advantage. On the other hand the segregation of engineers into well defined areas is difficult to contemplate.

If the only opportunity for a general assembly is to be on the occasions of the Institution Meetings, then the loss to the industry will soon show itself. Again many members of the Institution never get up to the June and Autumn Research meetings so that the preservation of the existing territorial boundaries would seem to be important.

I do not propose to discuss the structure of the Institution which must be established if all the present members of the district Associations are to be brought in; this is a problem which must be thought out with care, having in mind the Institution's Charter. Such organisation as has been tentatively suggested may not affect this Association very much, but the consideration must be carried a stage further.

Juniors

This brings me to the question of the Junior Associations. What is to be the position of these bodies? There is unanimity of view that the Junior bodies have more than fulfilled the objects for which they were formed. The education of the young entrants to the industry is assisted and broadened by the visits paid to works. In the more recent past the value of the contributions presented to these bodies has steadily grown. Sir Frederick West has spoken with conviction on the value of open discussion, the opportunities for which are provided by the Junior Meetings. Each Junior Association is affiliated to a Senior body and any consideration of the future of the latter organisations, raises very important problems in respect of the former.

How are the Juniors to be fitted into the picture? Can they preserve their identity in a new organisation? Their functions and management have become well defined and can have a place in the new set up of the industry as independent organisations. They have been accepted by the Institution as one of its affiliated bodies. I cannot here discuss the problem in all its details, but enter an earnest plea for the continued activity of the Juniors, even if this means that the Juniors are to be allowed autonomy under the benevolent control of the Area Boards and with the sympathetic help of the Institution.

If the problems of bringing all the members of the Senior Associations into some form of membership presents grave difficulties to the Institution, how much more difficult will be the resolution of the problem when we come to consider the present membership of the Junior bodies. It may be argued that the Associations must now be brought within territorial boundaries in respect of their membership, because consultation as between these bodies and the respective area Boards is both desirable and necessary. If this proves to be the case then obviously the readjustments must be made. In this case examination suggests that only minor adjustments will be necessary except in one or two cases but it will be necessary for each Association to set up regional committees for the discussion of matters at Area Board level. Consideration suggests that in this case co-operation through a joint body such as the Institution offers will be advisable.

The whole case really turns upon two main factors. Two bodies exist each with well-defined objects. The Institution must continue to serve its members in all matters relating to their status, and qualifications, and this would seem to be an entirely satisfactory arrangement *vis-à-vis*, the Area Boards. But the Institution is also a clearing house for technical matters, its continuance as such must remain.

Closer Links

The Gas Engineers' National Guild has been established to protect and to further the interests of its members. The functions of each are sharply divided, but these functions are in some measure complementary. Thus it is necessary to see the District Associations as serving their members by enabling them to maintain those valuable contacts which have proved so useful in the past, and also providing the machinery for contacts with the Area Boards if desired. Additionally they must protect their membership by insisting upon a careful scrutiny of the qualifications of new entrants, and here would seem to lie the necessity for a closer link with the Institution. Membership of the Gas Engineers' National Guild would then be conditional upon obtaining the certificate of the above body. This point raises difficulties since the Gas Engineers' National Guild has recently opened its membership to non-technical groups, but no doubt these problems will be resolved by discussion on a truly co-operative basis.

In spite of a predilection towards the preservation of our present status I cannot help but see that from many points of view the new proposals will be of advantage in the long run, and provided the fullest interchange as between the various Area Associations can be maintained, then I feel we can accept any proposal for the inception of full discussions with the Institution and the kindred Associations.

After a lifetime in the service of the industry a man becomes wedded to its interests and development, so that in the changes ahead I can only hope that the enthusiasm, interest, and endeavour which have characterised us in the past, may still serve the cause of gas service in the future.

GAS IN FRANCE

(From Our Own Correspondent)

THE chief topic in the current *Journal des Usines à Gaz* is the very successful Salon des Art Ménagers held in the Grand Palais, Paris, from Feb. 24 to March 13—a sort of Ideal Homes Exhibition, but officially sponsored at the highest level. Judging, says the Editor, from the attendance, which reached 70,000 on the most popular days, the Salon of 1949 attained more success than any former ones, which is no more than a just reward for its perfect organisation. Vast as the Grand Palais is, it was not vast enough to contain the crowds which flowed through it on Sunday and Saturday afternoons attracted by the novelties presented in every part of the field of household equipment. As in former years the stand of Gaz de France and the traditional Allée du Gaz, which formed the object of all possible care on the part of the Society for the Development of the Gas Industry in France, constituted one of the major exhibits of the Salon. Its position in the exhibition was particularly happy since it served as the starting point of all official visits. Here the President of the Republic and the Minister of Education paused for a long time and listened with genuine interest to the information given to them by M. Ferlet, Director-General of the Society.

The Stamp of Approval

A photograph of the stand forms the illustration on the cover of the March *Journal des Usines à Gaz*. In the apparatus shown upon it the accent was on the advantage of automatic regulation of temperature in all forms of cooking apparatus and upon safety in the operation of apparatus for space heating and the production of hot water. Throughout the exhibition the stamp of approval, NF-ATG, was in prominent evidence. According to custom numerous visits were organised for installation engineers, for architects, and also for salesmen and others who were in attendance at the commercial courses of the Association Technique de l'Industrie du Gaz en France.

A brief description of the Salon is given with an account of the official visits above referred to. On Mar. 4, the President of the Republic, M. Vincent Auriol, was received by M. le Guellec, President of the Council of Administration of Gaz de France, supported by M. Varlet, Director of Gas and Electricity in the Ministry of Industry and Commerce, and Professor Ribaud, Director of Research of Gaz de France.

The 18th Salon was not a revolutionary exhibition but rather one of consolidation. Apparatus seen last year has passed into production, the thermostat has become a matter of routine, and if there is no sensational novelty there is a definite improvement in quality and external appearance. 'It is too soon,' concludes the article, 'to estimate the business which was initiated, but once again it was excellent propaganda for our industry, and our electrical friends will not object if we cite the compliment paid us by one of their exhibits which, over an electric kitchen utensil in operation, bore the slogan "Cooks like Gas."'

Our French colleagues are vastly interested in the meetings of the International Gas Union to be held in June, in London. The Editor records a meeting of the Council of the Union held in Paris in February when Belgian, British, French, Dutch, Swedish, and Swiss delegations drew up the programme; the number and quality of the reports and communications to be presented will make the June meeting one of the capital events in the gas industry in 1949.

The two technical features in the March Journal are (1) the first part of a thesis by Mme. F. Plotegher, 'A Contribution to the study of gums in gas,' and (2) a paper on gas space heating by 'air pulse' apparatus in which air is mechanically injected over or through a gas heated element, by M. P. Richalet. M. Richalet points out that systems of this kind are particularly suitable to such premises as workshops, theatres, schools, restaurants, and public halls generally, and that gas is the ideal fuel for such duty.

He describes an installation in a Versailles school consisting of an electrically driven fan and a gas-fired heating element with thermostatic control. The heating element is a metallic heat interchanger in which there is no risk of entry of products of combustion into the air stream. The heated air enters the several rooms through controlled orifices under a slight pressure and is evacuated normally through the inevitable interstices of doors and windows. Four volume changes per hour are arranged for.

In February, M. Etienne Audibert, President of the Coal Mining Industry, presented a paper to the Ste. de Ingénieurs Civils on tribulations and perspectives in the French Coal Mines. France, he said, was relatively poor in indigenous coal. Her reserves are estimated at 12,000 to 14,000 mill. tonnes, compared with Germany 290,000 mill., Great Britain 200,000 mill., and Poland 140,000 mill. Her coal seams are situated at relatively great depths, they are often very thin and, particularly, they are much broken by dirt bands and faults. Only a relatively small proportion of it is suitable for the production of coke for the steel industry, which itself is great in proportion owing to the relatively large reserves of iron ore in the country. The proportion of indigenous coal used in the production of metallurgical coke has not yet exceeded a limit between one quarter and one-third of the requirements. And the coal fields are not well situated geographically, lying for the most part along her continental frontiers. Transport to the interior and the west is costly. The competition of imported coal is thus such that nearly one ton is imported for every two tons of indigenous coal.

Dating from the economic crisis of 1931, maintenance of the mines and their equipment was neglected, so that by 1940 most of this work was in arrears and normal renewals were suspended during the four years of occupation. Production fell to about 25% of that of 1938. At the same time the usual foreign sources of supply, Poland and Great Britain, were in no position to help. Great Britain particularly was supplying her own needs with difficulty. And to make matters worse, while the United States had nearly doubled her output, France was poor in gold and the price of American coal at the ports was four times that at the mine.

The French coal industry was nationalised in May, 1946. M. Audibert recounted the technical and political difficulties and vicissitudes through which the industry has passed since that date. He was confident that the improved social and technical conditions in the collieries would permit the output per man-shift to be raised 10% above that of 1938.

Upgrading of Coal

To the same Society M. Thibault, Director-General of the Coal Industry, presented a paper on the 'valorisation' (upgrading) of French coal production. Augmentation of production leads to an increase in fines and dirty coal, of which the best use is made in power stations situated at the collieries. These stations operating at 30% thermal efficiency already produce 13% of the country's electrical energy. Unfortunately, most of them, constructed about 1920-24, are at the end of their useful life, and their replacement is imperative. New stations totalling a capacity of 1 mill. kW are in course of construction and by 1952 it is anticipated that the collieries will be producing 1,695,000 kW for a consumption of 6 mill. tonnes of coal of low grade against the existing figure of 885,000 kW consuming 5 mill. tonnes, of which much is saleable coal. The new programme will release about 1,300,000 tonnes of saleable coal and will turn 3 mill. units of electricity into the national system. Modernisation of coke ovens will further improve the efficiency of coal utilisation. The delivery of gas from coke ovens rose from 62 mill. cu.m. in 1927 to 163 in 1938 and to more than 300 in 1947. Fines are mixed with coals from Lorraine and a programme of construction has been fixed which will increase coke production from 7,600,000 tonnes in 1938, of which 4,500,000 tonnes was made in colliery ovens, to 10,300,000 tonnes in 1952, of which 4,500,000 will be made at the collieries. This last figure is the same as that in 1938, but it represents a great effort, since in 1948 the colliery ovens only produced 3,600,000 tonnes, their average age being 14 years in the North and 24 in the basin of the Loire, necessitating a complete reconstruction. All these ovens will be of the by-product type with producer gas heating, thus enabling them to make a valuable contribution to the requirements for synthesis gas, ammonia and tar derivatives and to the national economy.

The Ministry has decreed free sale of carbonaceous fuels for domestic purposes from April to July 1. The gas industry is particularly interested since conditions are favourable to the marketing of coke in this field, powerfully aided by the campaign of publicity recently undertaken by Gaz de France both for coke central heating and other domestic purposes. Anthracites and similar coals are and will be in short supply, but it is pointed out that coke will not keep its favourable position unless it is delivered in good quality.

A farewell dinner of the Houghton-le-Spring District Gas Company was held at Sunderland on April 14. Col. E. C. Woodall, Chairman of the Company, was absent owing to indisposition. Mr. G. W. Martin, Engineer and Manager, presided, and in giving the toast of the Directors, made reference to the long connection of the Woodall family with the Company for the past 40 years. Reference was also made to Mr. Wm. Cash, Junior, Secretary of the Company. The toast of the Company was proposed by Mr. S. Gould, and Mr. Martin was presented with a fountain pen as a memento of the occasion.

The latest word

Here are the two latest models in the NEW WORLD No. 1430 series of Gas Cookers. The No. 1640, shown above, has a sixteen-inch high oven and four boiling burners. The No. 1840, shown on facing page, has an eighteen-inch high oven and four boiling burners. Each has a large high-efficiency grill. Both models embody all the proven NEW WORLD features and many new developments achieved by Radiation research.

NEW WORLD

T.24 A PRODUCT OF Radiation Ltd

Radiation Ltd *Radiation House, Aston, Birmingham, 6*

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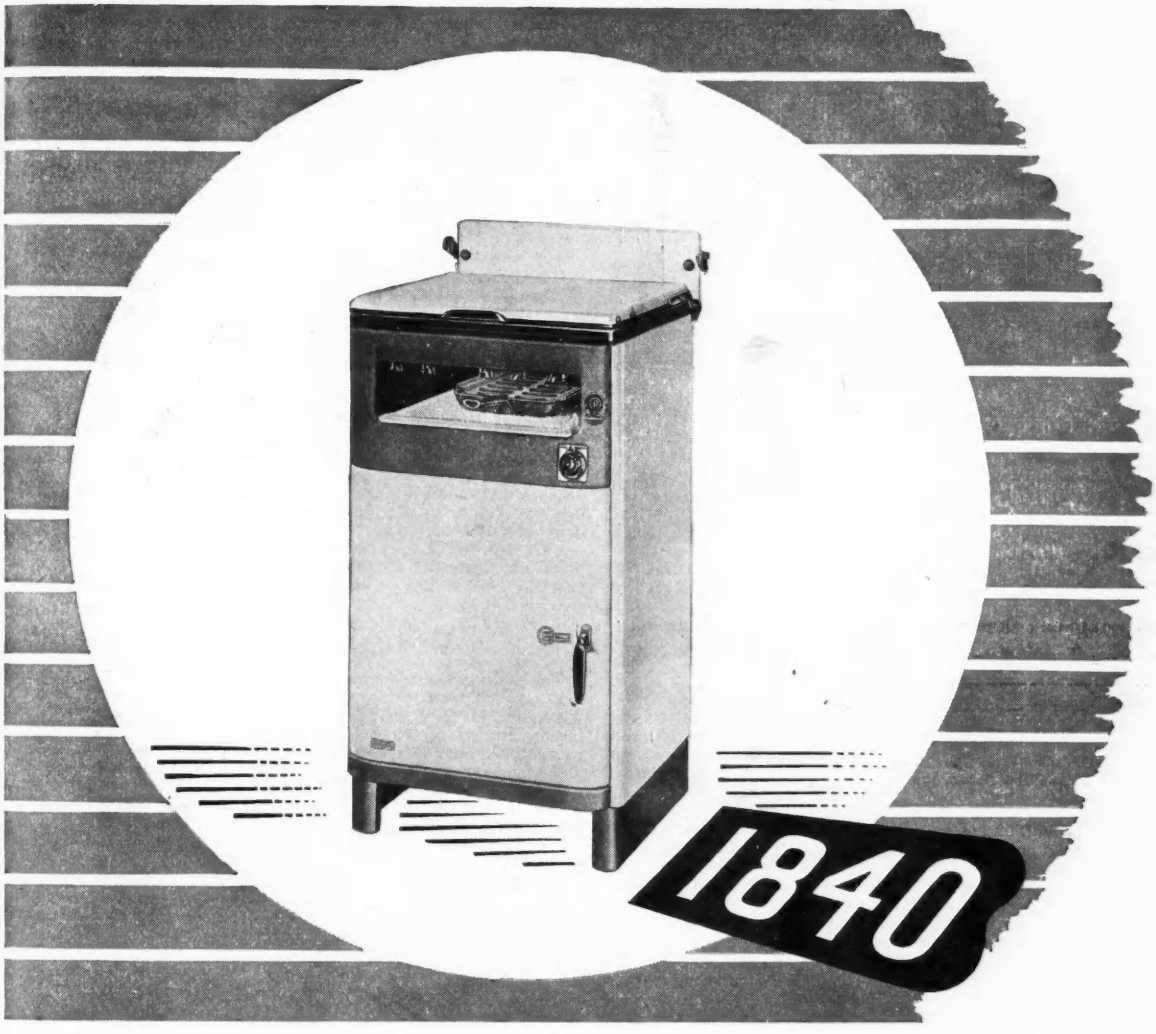

Chief of these is the Unit Construction principle whereby each unit is self-contained and may be removed independently from the chassis with minimum disturbance to all the others. Thus the external sheathing, the oven door, the one-piece grill chamber (carrying all the hotplate components) and the oven unit are all readily and separately removable in each model.

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NEW WORLD NEW WORLD NEW WORLD

ASSOCIATION OF TAR DISTILLERS

THE annual report of the Association of Tar Distillers for 1948 reveals that the Association has continued to work in close co-operation with the By-Products Control during the year and has also continued to support the work of the British Tar Confederation, particularly in regard to the collection of statistics for the Survey Report.

Invitations to membership of the Coal Tar Research Association were circulated by the constituent members of the Association in the early part of the year, and a very satisfactory response was forthcoming from tar distillers. Offices have been set up at the premises of the British Tar Confederation and a permanent whole-time secretary, an abstractor and an intelligence officer employed. Dr. McNeill was appointed to the Directorship of the Association in July, 1948, and at the end of the year negotiations were proceeding very satisfactorily for the leasing of Union Mills, Gomersall, from the Ministry of Supply, and transforming them into permanent offices and laboratories. Application had been made to the Board of Trade for incorporation and to the D.S.I.R. for a grant. Panels of technical men have been set up to advise the Director in the fields of organic research, intelligence and abstracting, and works and processes.

Home demands for road tar were fully met and a considerable quantity exported to France, although this amount was limited by the difficulties met by the French in obtaining sufficient currency to buy their full requirements.

Creosote Exports

Home demands for all types of creosote were met and considerable quantities were exported, mainly to the United States. Imperial Chemical Industries, Ltd., had been offered 36 mill. gallons for the proposed hydrogenation contract, though the actual contract had not been finalised by the end of the year. Demands for tar fuel oil continued to be substantial during 1948, particularly for use in steel works, and in this connection, towards the end of the year a regional inquiry was instituted to ascertain the regional supply/demand position.

During the year the future of the British Wood Preserving Association came under discussion and it was finally agreed to affiliate to the Timber Development Association, which would provide secretarial services and accommodation.

Home demands for pitch for all purposes had been met, demands for briquetting pitch falling considerably below the expected quantity. Considerable exports were made during the year. Certain matters relating to the transport of pitch were referred to the National Transport Committee for consideration.

Throughout the year the Coal Tar Bituminous Products Sub-Committee gave considerable attention to the supply of pitch for the manufacture of black pitch mastic flooring. Experimental work was carried out to determine the best method of preparing pitch for this purpose in order to avoid unpleasant fuming when it was heated preparatory to laying, and meetings were held between the tar distillers and flooring contractors under the ægis of the Factory Department. By the end of the year a proposed scheme for licensing the manufacture of this special pitch was well in hand.

The case for re-classification of creosote/pitch mixture which had been submitted by the Association of British Chemical Manufacturers' Traffic Secretary to the railway companies, was still under negotiation at the end of the year, due to unavoidable delay in collecting information required by the Transport Tribunal. The National Transport Committee continued to deal with all matters in connection with transport on behalf of the Association, and the Association of British Manufacturers' Traffic Committee continued to watch the general interests of members as heretofore.

Hydrocarbon Oil Duties

Certain consuming interests had passed to the Government a resolution seeking to remove the duty on light oils on the grounds that the duty was an addition to costs and made competition in the export market more difficult. After consultation with the late Secretary of the Association, however, the representations had been modified to an application for the extension to light hydrocarbon oils used for all industrial purposes, of the concession accorded to such oils used for chemical synthesis—imported oils so used being granted a rebate of the net amount of duty paid and indigenous oils so used a payment to the user of the amount equal to the duty which would have been paid if these oils had been imported instead of home produced. That system left the market price and therefore the return to the producers of indigenous oils the same, but the user was relieved of the effect that the import duty on light hydrocarbon oils had on the market price of indigenous oils. Towards the end of the year a Government proposal to vary the statutory definition of light oils was under discussion with H.M. Customs and Excise.

During the year the A.B.C.M. approved the formation of a Tar Products Consumers' Committee to co-ordinate the activities of separate committees of consumers of various tar products and to be a complement to the A.T.D. products committees. The Association's representative on the Joint Consultative Committee for Chemical Industries has continued to co-operate in the work of the Committee and represent the Association's views. Towards the end of the year an inquiry was instituted into the chemical industry by the Board of Trade which agreed that the inquiry should be carried out in the first instance by the A.B.C.M. It was, however, agreed that the tar distilling section of that industry should be the subject of a separate inquiry by the Ministry of Fuel and Power.

DEVELOPMENT AT BRADFORD

The installation of new plant, which includes many labour-saving devices is progressing speedily at the Birkshall gasworks of the Bradford Gas Department. Modern reinforced concrete coke storage hoppers, which when completed early next year will tower 90 ft. high, are already nearly half that height, and superimposed on this structure will be a coke grading plant. A great saving of labour will be effected by ground level chutes automatically controlled for bag-filling and weighing of coke. As the new building will replace the present hoppers, in use since 1917, these will be demolished. Alongside the new structure, preparations are well in hand for the installation of an overhead travelling crane. The modern hoppers will result in a better graded fuel for consumers in Bradford. A new retort house is also to be built alongside the existing premises, but work on this has yet to be started. On the completion of the work, the daily output at Birkshall will be approximately 20,000 mill. cu.ft. —a third more than at present. Extensions to the manufacturing plant and distributing system, previously scheduled for completion between 1947 and 1951, are estimated to cost just over £1,250,000.

WOMEN'S GAS COUNCIL

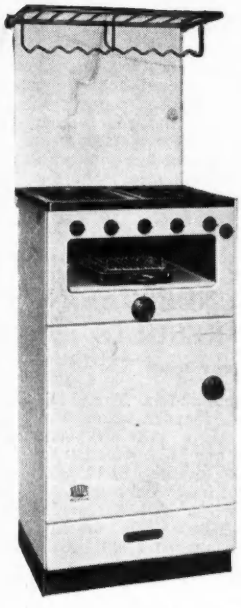
The 10th annual meeting of the Burnley Branch of the Women's Gas Council was held in the Gas Showrooms on April 11. Mrs. Ames, President of the Branch, made reference to the approaching nationalisation of the gas industry, and appealed to all members to continue their support after May 1. She thanked the officials and members of the committee for their continued help and support and for their co-operation in many ways during the year.

Miss Williams, Secretary, submitted her annual report, recording, among other events, a presentation to Mr. A. F. Ames, the retiring gas Engineer and Manager, as a mark of affection and respect.

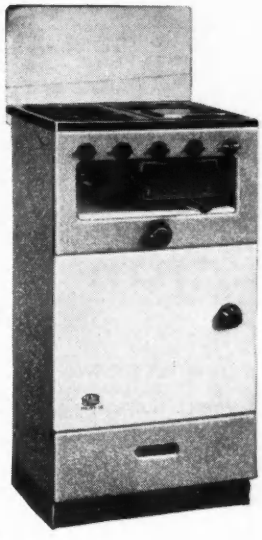
Mr. T. Boylan, Showroom Manager, gave an address in which he stated that sales of appliances at the showroom reached a total sales value of £40,043 in 10 months. On the Corporation housing estates between 85% and 90% were using gas.

GAS CONSULTATIVE COUNCIL

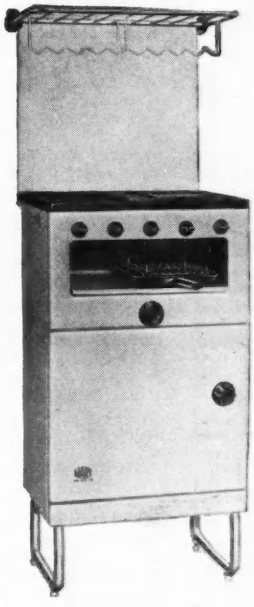
Mr. Boyd-Carpenter, M.P. for Kingston-on-Thames, asked the Minister of Fuel and Power on April 14 which bodies and associations have been invited to nominate candidates for appointment to the South Eastern Region Gas Consultative Council, and if he would give the names of the bodies or associations whose candidates have been appointed to the committee. In reply, Mr. Hugh Gaitskell said that the South Eastern Gas Consultative Council had not yet been appointed, and, in answer to a further question from Mr. Boyd-Carpenter, that he would not give an assurance that the Council would be appointed before vesting day. Under the Gas Act, he continued, a period of six months was allowed after May 1 before the Council had to be appointed. Mr. Boyd-Carpenter then asked whether the Minister was satisfied to leave consumers without any protection whatsoever for that period. Mr. Gaitskell replied that he expected the Council to be appointed well in advance of the six months' date. In answer to the first part of the question, Mr. Gaitskell gave the following list of bodies which have been asked to nominate candidates for appointment to the Consultative Council:—The Association of Municipal Corporations, the Urban District Councils' Association, the Rural District Councils' Association, the County Councils' Association, the Joint Standing Committee of Metropolitan Boroughs, the L.C.C., the Association of British Chambers of Commerce, the Federation of British Industries, the National Union of Manufacturers, the Parliamentary Committee of Co-operative Congress, the T.U.C., the National Council of Women, the Standing Joint Committee of Working Women's Organisations, the Women's Gas Council, and the Women's Voluntary Services.



177 with platerack and backplate; 4 boiling burner hotplate; 16" oven; plinth base; cream/black finish.



177 with short splashplate; 3 boiling burner hotplate; 14" oven; plinth base; dapple/white finish.



177 with platerack and backplate; 3 boiling burner hotplate; 14" oven; tubular legs; cream finish.

177 with short splashplate; 3 boiling burner hotplate; 16" oven; cast iron legs; dapple/white finish.

CHOICE OF 177 FEATURES

Platerack and backplate, or short splashplate.

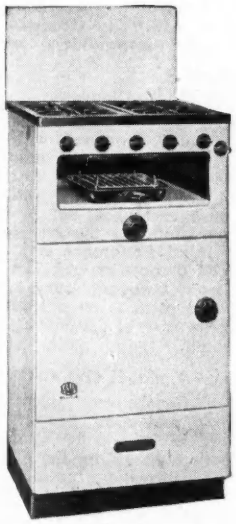
Hinged cover with shelf.

Oven heights: 14" or 16". (Portal, 14" only)

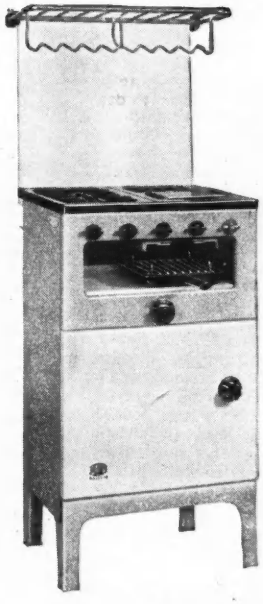
Hotplates with 3 or 4 boiling burners.

Cast iron legs; plinth base or tubular legs.

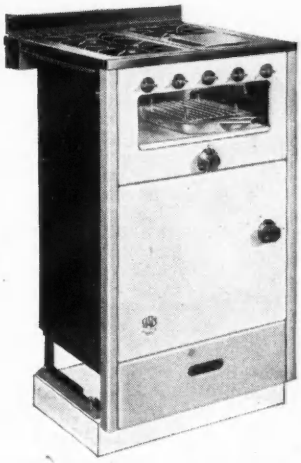
The finishes are: dapple and white, or cream and black.



177 with short splashplate; 4 boiling burner hotplate; 14" oven; plinth base; cream/black finish.



177 with platerack and backplate; 3 boiling burner hotplate; 14" oven; cast iron legs; dapple/white finish.



177 Portal type with cream/green finish. (Supplied only with 3 boiling burner hotplate and 14" oven).

177 Build-in type with 14" oven; plinth base; cream/black finish. (Supplied only with 3 boiling burner hotplate).

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GAS REGULATIONS

Compensation values under the Gas Act, 1948, for the securities of each of 28 companies which are quoted on the Stock Exchange were issued by the Minister of Fuel and Power on April 20 in a first official list. The values were determined to be the market price in October, 1947, or the first half of 1945, whichever were the more beneficial. The list is published in Gas (Security Values) (No. 1) Order, 1949, made on April 14 and operative on April 23. The Gas Council has already announced that a list of the securities of gas undertakings of which the value has been determined before vesting day will be published on April 29. The values shown in this first Order are the same as those published in the *Journal* on Jan. 28, 1948, p. 195, following first publication of the Gas Bill, with the following exceptions:

	Official value	Estimate Jan., 1948
Cambridge U. and T., cons. 'B' (7% Max.)	145¼	143⅔
Cheltenham, 5% basic cons. ord.	110⅝	107½
Croydon, 4% deb.	102½	102½
Newport (Mon.), 5% deb.	122½	118½
Reading, 4% deb.	99 7/10	99½
Sheffield & District, 4%	101	101¼
Tunbridge Wells, sliding scale	131¼	130

Gas (Stock) Regulations (S.I. 751) make provisions for the issue, transfer, dealing with and redemption of British Gas Stock to be issued under Section 43 of the Gas Act. These apply as from May 1.

The Gas (Financial Years) Regulations (S.I. 743) provides that the financial years of each Area Board and the Gas Council shall end on Mar. 31, and the Gas (Pension Scheme) Regulations (S.I. 744) authorise any Area Board or the Gas Council to establish or participate in any scheme approved by the Minister of Fuel and Power for providing pensions for persons in their employment or the employment of their Consultative Council, or for other persons mentioned in Section 58 (1) (*a*) of the Gas Act. These two regulations come into force on May 1.

Another instrument, the Gas (Allocation of Undertakings to Area Boards) Order (S.I. 742) determines in which Area Boards the property, rights, liabilities and obligations of the various undertakings are to vest, and also provides that those of one Company—the North Western Gas Corporation—shall vest in the Gas Council. This order comes into force on May 1.

TRADE NEWS

The Head Office of The Woodall-Duckham Vertical Retort & Oven Construction Company (1920), Ltd., has been transferred to Woodall-Duckham House, 63-77, Brompton Road, London, S.W.3. (Tel.: Kensington 6355.)

* * *

The Power-Gas Corporation, Ltd., Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees, have acquired the lease of the new North-East Trading Estates factory in Bowesfield Lane, Stockton. The Stockton Companies, the first tenants of the new factory, state that it will be specially equipped for the efficient production of heat exchangers, industrial fume and dust control and recovery plant, pneumatic conveyors, and general light assembly work in connection with their speciality plants for the chemical and gas industries. The factory, built on a 2½-acre site, has a workshop floor area of about 20,000 sq. ft. and is designed for ultimate expansion to 60,000 sq. ft. It is a modern building, self-contained, with office block, canteen and kitchen, and will give much-needed additional production capacity to the Stockton Companies.

Metropolitan Gas Meters, Ltd., have established a stores and service depôt at Wetherby, near Leeds, for the convenience of their Northern customers.

* * *

Simon-Carves, Ltd., have been appointed by the National Coal Board (North Western Region) to act as engineers and contractors for the whole of the civil engineering work involved in the reorganisation of the Bold Colliery, near St. Helens, Lancashire. They will be responsible for foundations, drainage, demolition work, and the construction of all the new colliery buildings and structures required. A new shaft of 1,100 yds. total depth is to be sunk and horizon mining is to be introduced. The principal new feature will be a Koepe winding installation, which necessitates building a reinforced concrete tower 230 ft. high and completely closing in the pit head. It is estimated that the work will take five years to complete.

* * *

In consequence of the increasing scope of their business, the name of Commercial Structures, Ltd., Staffa Works, Leyton, E.10, has been changed to indicate the more comprehensive products and services offered by the Company. The new name is Chamberlain Industries, Ltd. (the Chamberlain family having been associated with the business since its formation). There is no change in the constitution of the Company, whose services to the gas industry include industrial building, heating and ventilating, reinforced concrete, structural steelwork, metal spraying, heat treatment, tube bending, shot blasting, paint spraying, and impregnation of porous castings. There are also departments supplying machine tools and dealing with plant sales and hire. The works at Leyton covers an area of nearly eight acres.

* * *

Steels Engineering Co., Ltd., Sunderland, has published details of the latest Coles Loco Shunting Crane, model 85524, which comprises a normal mobile crane superstructure mounted on a loco undercarriage. When fitted with a standard 30 ft. cantilever jib, the crane will lift three tons at 13 ft. 6 in. radius and proportionately lighter loads up to a maximum of 25 ft. at which 1¼ tons can be lifted. Hoisting, derricking, slewing and travelling are each controlled by separate electric motors, driven by current from a specially designed variable generator, coupled to a diesel or petrol engine. The drive is a 12 h.p. electric motor which gives a travelling speed of 300 ft./min., and the wheels have sliding axles to enable sharp curves to be negotiated. Safety devices include a sale load indicator and self-resetting limit switches to protect the hoist and derrick motions. The undercarriage can be fitted with railway type buffers and drawgear to enable it to pull or push two to three fully loaded 10 ton wagons.

COMPANY RESULT

Gibbons (Dudley), Ltd.

Net profit for 1948 of the Parent Company, including dividend from subsidiary companies, and after providing for taxation and depreciation, is £56,270. The Subsidiary Companies' profits, after providing for dividends payable to the Parent Company, depreciation, taxation and minority interest, total £23,940. The Directors state that these profits are above the average expectation of present turnover and productive capacity, since they include the results of overseas contracts taken soon after the war. A dividend of 10% and a bonus of 7½% on the Ordinary shares, making 17½% for the year, of which 7½% has already been paid, absorbs £12,873, and the carry-forward is £33,427. The Chairman, Mr. W. E. Gibbons, in his statement circulated with the accounts, says that the Company's order book is as full as ever and new designs evolved and licensed during the year should help to maintain this position. It is not thought that the nationalisation of the gas industry will make any immediate difference to the Company's trade, but the disappearance of so many gas companies from the Company's books means a break which causes real regret.

GAS UNDERTAKINGS' RESULTS

Brigg Gas Department

In his annual report, Mr. C. E. Smith, Engineer and Manager, states that output has doubled since 1937. A comparison between 1948 and 1937 gives the following figures: gas made, 62,115,000 cu.ft. (against 30,961,000); coke made for sale, 1,460 tons (against 207); tar made, 74,000 gal. (against 26,000); and number of consumers, 2,063 (against 1,300).

Shirebrook and District Gas Company

Balance of profit carried from revenue to profit and loss account for the year ended Dec. 31 was £6,731, the net profit after providing for taxation being £3,780. A dividend of 12½% leaves a balance of £9,066 to be carried forward, against £8,723 brought in from 1947. The Directors' report points out that the amounts payable for the four months of this year up to May 1, so far as they are not paid by the Company before that date, will be distributed by the stockholders' representative.

Lea Bridge District Gas Company

Receipts from the sale of gas in 1948 were up by £96,261 compared with the previous year, and the sale of residuals brought in £44,553 more than in 1947. As the result of the year's working, £52,292 has been carried to net revenue account, the net profit for the year being £15,409. The usual Preference dividends have been declared together with 7½% on the Consolidated Ordinary stock, and £3,155 has been allotted to co-partnership, leaving a carry-forward of £29,309, against £30,911 brought in.

Wellington (New Zealand) Gas Company

The net profit for the year ended Dec. 31 was £22,942, and after payment of interim dividend of 3% on the Ordinary shares, the year's dividend on the Preference shares, and providing for taxation, depreciation of plant, buildings and machinery, the balance to profit and loss appropriation account is £25,663. A final dividend of 3%, making 6% for the year, leaves a balance of £17,299, against £14,996 brought in. Presiding at the annual meeting, Dr. C. Prendergast Knight said that insufficient supplies and unsuitable quality of the coal available were still a matter of anxiety, and it had been impossible to build up any reserve stocks. A new C.W.G. plant, forming an auxiliary to the continuous vertical coal gas plant, came into operation in August, and is working satisfactorily.

GAS STOCKS AND SHARES

Following the Easter holidays, stock markets opened quietly with the closing of the long account, showing firmness in most directions. The new account opened on a good note, and dealers in British funds reported in particular a good turnover. Later in the week conditions became unsettled following the attack on British warships in the Yangtse river and as a result of a disposition to await the outcome of the discussions on the wage claims of the National Union of Railwaymen. British funds, however, showed renewed strength, and the Government securities index rose to 113.97, against 113.84 for the previous week, and the industrial index rose from 114.3 to 115.0.

A feature of the new account has been the start of dealings in Gas stocks on the ex-dividend and stamp-free basis. An increase in gas stocks transactions was recorded, rising from 48 on the last day of the long account to 118 on April 20 and to 147 on April 21. There was a large turnover in 'war damage' issues—namely, those which may benefit from Clause 26 of the Gas Act, which provides for better than Stock Exchange prices if gas sales and Stock Exchange prices suffered as a result of war damage. In this category, Gas Light and Coke, South Metropolitan, and Commercial Gas showed increased prices. To cover the 2 per cent. stamp duty which is no longer payable on transfers prices of almost all gas stocks were raised, and in view of these alterations a full list of quotations on the London Stock Exchange on April 21 is given below. It should be noted in reference to the list that the column headed 'When last ex dividend' is no longer applicable, the majority of stocks having been made ex dividend as from April 20 in accordance with the Gas Council's announcement.

Quotations on the London Stock Exchange

When last ex-Dividend	Dividends Interest. Total for Year %	NAME.	Quotations Apr. 21
Mar. 2	4	Alliance & Dublin Cons. Ord.	21/6—23/6
Mar. 30	5	Asscd. Gas & Water U'd'tgs Ord.	22/6—23/6
,,	6	Do. Deferred	23/6—24/
,,	4½	Do. 4½ p.c. Red. Cum. Pref.... ...	21/ —20/6
,,	4	Do. 4 p.c. Red. Cum. Pref.	20/ —20/6
,,	4	Do. 4 p.c. Irred. Cum. Pref.... ...	19/ —19/6
Mar. ,, 2	7	Barnet Ord. 7 p.c. max.	151—156
Mar. 16	5	Bath Cons. Ord. 5 p.c. basic	108—113
Feb. 16	6½	Bombay, Ltd., Stock	34/ —39/
Mar. 2	8½	Bournemouth Std. 5 p.c. sliding scale ...	160—165
,,	7	Do. 7 p.c. max. div.	150—155
,,	4	Do. 4 p.c. Pref.	96—101
,,	6	Do. 6 p.c. Pref.	124—129
Feb. ,, 2	3½	Do. 3½ p.c. Red. Deb.	95—100
Dec. 15	4	Do. Perp. 4 p.c. Deb.	96—101
Mar. 2	5·35	Brighton, &c., 5 p.c. Std. Cons.	105—110
,,	6·3	Do. 6 p.c. Std. Cons.	115—120
Dec. 15	5	Do. 5 p.c. Perp. Deb.	124—126
Mar. 2	5	Bristol, Gen. Cap. 5 p.c. max.	117—119
Dec. 15	4	Do. 4 p.c. New Deb. Red.	100— 102
Mar. 16	7½	Brit. Gas Light Ord.	129—134
Jan. 5	5½	Do. 5½ p.c. 'B' Cum. Pref.	113—118
Dec. 15	4	Do. 4 p.c. Red. Deb.	96— 98
Feb. 16	10	Cambridge U. & T. Orig. 10 p.c. Cons. ...	200—210
,,	5	Do. 5 p.c. Cons. 'C'	100—105
,,	7	Do. 7 p.c. Cons. 'B.'	144—145
Apr. 20	4½	Cape Town, Ltd., 4½ p.c. Cu. Pf.	17/ —19/xd
Feb. 16	7½	Cardiff Con. Ord.	124—126
Mar. 30	5	Cheltenham, 5 p.c. basic Cons. Ord. ...	109—111
Dec. 15	4	Do. 4 p.c. Perp. Deb.	98—103
Feb. 2	5⅜	Chester United Ord.	112—117
Nov. 3	7	Colombo Ltd., Ord.	27/ —32/
,,	7	Do. 7 p.c. Pref.	22/ —24/
Apr. ,, 20	5	Colonial Gas Assn. Ltd. Ord.	14/ —16/xd
,,	8	Do. 8 p.c. Pref....	22/ —25/xd
Feb. ,, 2	5	Commercial Ord.	92— 97
Dec. 1	3	Do. 3 p.c. Deb. Perp....	76— 78
Feb. 16	5	Do. 5 p.c. Irred. Deb....	113—115
,,	6	Croydon sliding scale	122—127
,,	5	Do. max. div.	105—110
,,	4	Do. 4 p.c. Irred. Pref.	98—103
Dec. ,, 15	4	Do. 4 p.c. Perp. Deb....	101—103
,,	5	Do. 5 p.c. Perp. Deb....	125—127
Feb. ,, 16	8	Derby Cons. Ord.	139—141
Dec. 15	4	Do. 4 p.c. Red. Deb.	97—102
Mar. 2	5	East Hull Ord.	98—103
Feb. 16	5	East Surrey 'B,' 5 p.c.	101—106
,,	6	Do. 6 p.c. Cum. Pref....	119—124
Dec. ' 15	5	Do. 5 p.c. Irred. Deb.	124—126
Feb. 16	6⅝	East Wight Cons. Ord.	110—115
Mar. 2	5	Eastbourne 'A'	106—111
,, ,,	3½	Do. 'B'	103—108
Nov. ,, 17	5	Gas Consolidation Ord. 'A'	22/6—23/
,,	5	Do. Ord. 'B'	22/6—23/
,, ,,	4	Do. 4 p.c. Red. Cum. Pref.	19/6—20/
Feb. ,, 2	5	Gas Light & Coke Ord.	23/10½-24/4½
,,	3½	Do. 3½ p.c. max.	80 — 83
,, ,,	4	Do. 4 p.c. Con. Pref.	101—104
Jan. 5	3½	Do. 3½ p.c. Red. Pref....	99— 102
Dec. 1	3	Do. 3 p.c. Con. Deb.	89— 91
,,	5	Do. 5 p.c. Deb.	107—109
,, ,,	4½	Do. 4½ p.c. Red. Deb.	107—109
Mar. 16	3½	Do. 3½ p.c. Red. Deb....	99—101
,,	5	Gloucester Cons. Ord.	95—100
Feb. ,, 16	4	Great Yarmouth (8½ p.c. max)	14/—15/
,,	7½	Guildford Cons. Ord.	135—140
Mar. ,, 2	5½	Hampton C't, 5 p.c. Cons. Ord.	98—103
Feb. 16	5	Hartlepool G. & W. 5 p.c. Ord.	93— 98
Mar. 30	6	Hastings & St. L. (5 p.c. Std.)	104—109
,,	5	Do. (3½ p.c. Std.)	90— 95
June 16	7½	Holyhead & N. Wales Ord.	21/ —23/
Sept. 15	5	Hornsey 3½ p.c. Std.	92— 97
,,	6⅞	Do. 5 p.c. Std	113—118
May 19	8½	Imperial Continental Cap.	105—110
Sept. 1	7½	Lea Bridge Co., Cons. Ord....	137—142
Feb. 2	5½	Liverpool 5 p.c. Ord.	126—128
Mar. 16	7½	Luton Cons. Ord. 'A'	157—162
,,	6½	Do. Ord. 'B'	118—123
Jan. 5	8	Malta & Med'n., ord.	160—170
,,	7	Do. 7 p.c. 1st Pref.	110—115
,,	7½	Do. 7½ p.c. 2nd. Pref....	110—115
Feb. ,, 16	5 10s	M.S. Utility 'A' Cons.	103—108
,,	3 2 10	Do. 'B' Cons.	70— 75
,,	5	Do. 'C' Cons.	102—107
,,	4	Do. 4 p.c. Cons. Pref.	96 —101
May 19	2	Montevideo, Ltd. Ord.	90—100
Feb. 2	5⅜	Newcastle and Gateshead Ord.	25/9—26/3
Jan. 5	3½	Do. 3½ p.c. Perp. Deb.	98—100
Mar. 16	8½	Newport (Mon.) Cons.	99—104
Dec. 15	5	Do. 5 p.c. Perp. Deb....	121—123
Sept. 29	6½	North Middlesex 6 p.c.	126—131
,,	5	Do. 5 p.c. Pref.	108—113
Feb. 16	5	Northampton Cons.	106—111
Mar. 30	9	Oxford, Cons. Ord.	208—218
Dec. 1	5⅜	Plymouth & Stonehouse Ord	112—117
,,	8½	Do. Addl.	14½— 15½
,,	7½	Do. New	13½— 14½
Mar. 2	5	Do. 5 p.c. Deb. Perp....	122—127
Feb. 16	7½	Portsmouth & Gosport Cons.	149—154
,,	5	Do. 5 p.c. max.	105—110
,,	10	Preston 'A'	180—190
,,	7	Do. 'B'	129—134
June 24	46	Primitiva Holdings, Ltd. Ord.	8/—10/
Dec. 15	6	Do. 6½ p.c. Red. Cum. Pref.	97—102
Feb. 16	5	Reading, 5 p.c. max.	101—106
,,	3¾	Do. 3¾ p.c. Red. (Non-Cum.) Pref....	97— 102
Dec. 15	4	Do. 4 p.c. Perp. Deb....	98—100
Feb. 16	5	Romford, Ord.	113—118
Sept. 15	7½	Severn Val. Ltd. Ord.	23/3—23/9
Mar. 16	4¾	Do. 4½ p.c. Cum. Pref.	21/6—22/5
Mar. 2	6½	Sheffield Cons....	148—150
Jan. 5	4	Do. 4 p.c. Red. Deb.	99¼—101½
Mar. 2	6	South East'n Gas Ltd. Ord.	22/9—23/9
	4½	Do. 4½ p.c. Red. Cum. Pref.	21/6—22/6
	4	Do. 4 p.c. Irred. Cum. Pref.	19/9—20/9
Feb. ,, 16	5	South Metropolitan Ord.	105 —108
	6	Do. 6 p.c. Irred. Pref....	126 —131
	4	Do. 4 p.c. Irred. Pref.	98 —103
,,	3	Do. 3 p.c. Perp. Deb.	87 — 89
Dec. 15	5	Do. 5 p.c. Red. Deb.	104 —106
Jan. 5	5	South Suburban Ord. 5 p.c.	115 —120
Feb. 16	5	Do. 5 p.c. Perp. Pref....	110 —115
	4	Do. 4 p.c. Perp. Pref....	97 —102
	3¾	Do. 3¾ p.c. Red. Pref....	93 — 98
Dec. 15	5	Do. 5 p.c. Perp. Deb....	124— 126
Apr. 20	5½	South West. G. & W. Ltd. Ord.	20/8—22/5xd
Feb. 2	5	Southampton Ord.	104 —109
	6	Sunderland Ord.	117 —122
	4½	Swansea Ord.	85 — 90
	5½	Do. 5½ p.c. Red. Pref.	106 —108
Mar. 16	7	Swindon Cons. Ord.	116 —121
Mar. 2	5	Tottenham Ord.	121 —123
	5	Do. 5 p.c. Pref.	113 —115
	5½	Do. 5½ p.c. Irred. Pref.	123 —128
Dec. 15	4	Do. 4 p.c. Perp. Deb....	101 —103
Oct. 13	6.85	Tunbridge Wells, 4 p.c. Sliding	130 —132
	7	U. Kingdom Ltd. Ord.	23/3—24/3
Nov. 17	4½	Do. 4½ p.c. 1st Cum. Pref.	22/9—23/9
	4	Do. 4 p.c. 1st Red.Cum.Pref.... ...	19/9—20/3
Jan. 5	4½	Do. 4½ p.c. 2nd Non.Cum.Pf.... ...	20/ —21/
Mar. 16	3½	Do. 3½ p.c. Red. Deb....	95 —100
Aug. 18	6⅝	Uxbridge, &c., 5 p.c.Cap.	123 —128
	5	Do. 5 p.c. Pref.	110 —115
Dec. 1	5	Do. 5 p.c. Perp. Deb.	124 —126
Feb. 16	5	Wandsworth Cons.	122½—124½
	4	Do. 4 p.c. Pref....	102 —104
Dec. 15	5	Do. 5 p.c. Irred. Deb....	127 —129
	4	Do. 4 p.c. Irred. Deb....	101 —103
Feb. 2	5	Watford & St. Albans Ord.	122 —124
	5	Do. 5 p.c. Pref.	109 —114
	5½	Do. 5½ p.c. Pref.	125 —130
Feb. 16	5	Weymouth Ord. (5 p.c. Basic)	93 — 98
	10½	Woking District "A" Ord....	190 —200
	7.35	Do. "B" Ord....	134 —139
	7½	Wolverhampton Cons. Ord.	123 —128
Mar. 16	5	York Cons. Ord.	102 —107

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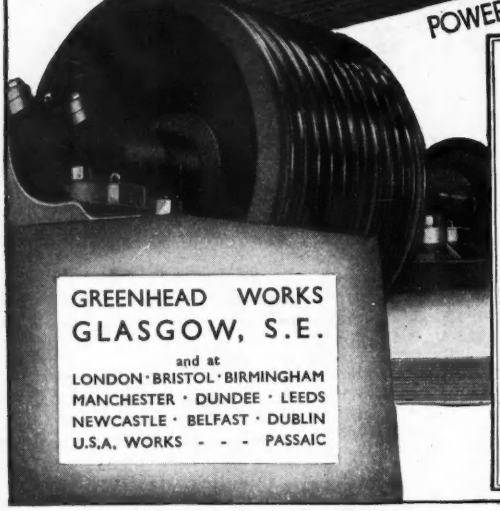

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